10¢ A COPY

The OIL WEEKLY

January 15, 1926 Volume 40. No. 4

The Biggest Operators and Pipe Manufacturers Are Standardizing On Harrisburg Forged Seamless Steel Couplings

Why?

Because oil men realize that the Forged Seamless Steel Coupling is far superior to any other type—and, like good soldiers, they are falling in line to adopt the quality standards that make oil field operation most economical.

And they recognize the uniform quality of Harrisburg Forged Seamless Steel Couplings. They know that, in Harrisburg, they have a coupling with

No Weld—No Weakness
Double Strength
Uniform Size
Perfect Thread and Perfect Taper
Threads that Do Not Strip or Gall.

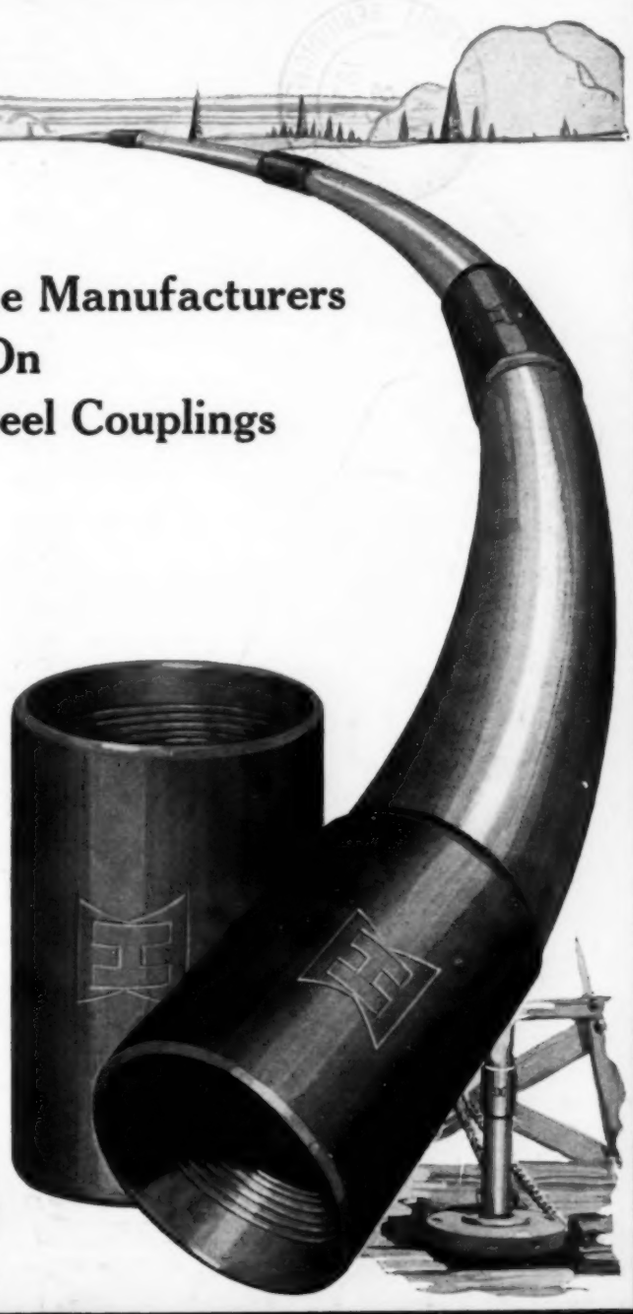
Wherever couplings are used—drill pipe, casing, tubing or line—use Harrisburgs. They will never give you reason to regret your choice.

Stocked and Sold by Leading Supply Houses

HARRISBURG PIPE & PIPE BENDING CO.
HARRISBURG, PA.

DISTRIBUTORS:

Harrisburg Pipe & Pipe Bending Co. of Texas, Inc., Houston, Texas
Harrisburg Supply Co., Tulsa, Okla.
Mr. George J. Hausen, Los Angeles and Taft, California



HARRISBURG
Forged Seamless Steel Couplings

REED ROCK BITS

An Easy Tool to Handle

Coming out of the hole with a fishtail bit, it is only necessary to break out that bit and screw in the Reed Rock Bit, as the Reamer Collar has been threaded to fit the same drill stem. There is no delay, as the Reed Rock Bit may be made up just as quickly as could a fishtail, inasmuch as there is no lubricator to fool with, no extra joint of pipe to be made up and figured into the log calculation, and no messing around with a lot of oil and grease refilling a lubricator and making sure it will work.

Going back into the hole, the driller is permitted to open up his slush pump and continue drilling until either the rock has been made or cutters have been worn down, in which case he comes out of the hole and by simply loosening one set-screw, makes a complete change of cutters and is ready to go back easily within ten minutes of time, instead of devoting two or three hours to breaking down the entire bit, disconnecting from lubricator, opening and changing.

The Reed Rock Bit is much more easily handled on the derrick floor than any other rock bit known.

Reed Roller Bit Company

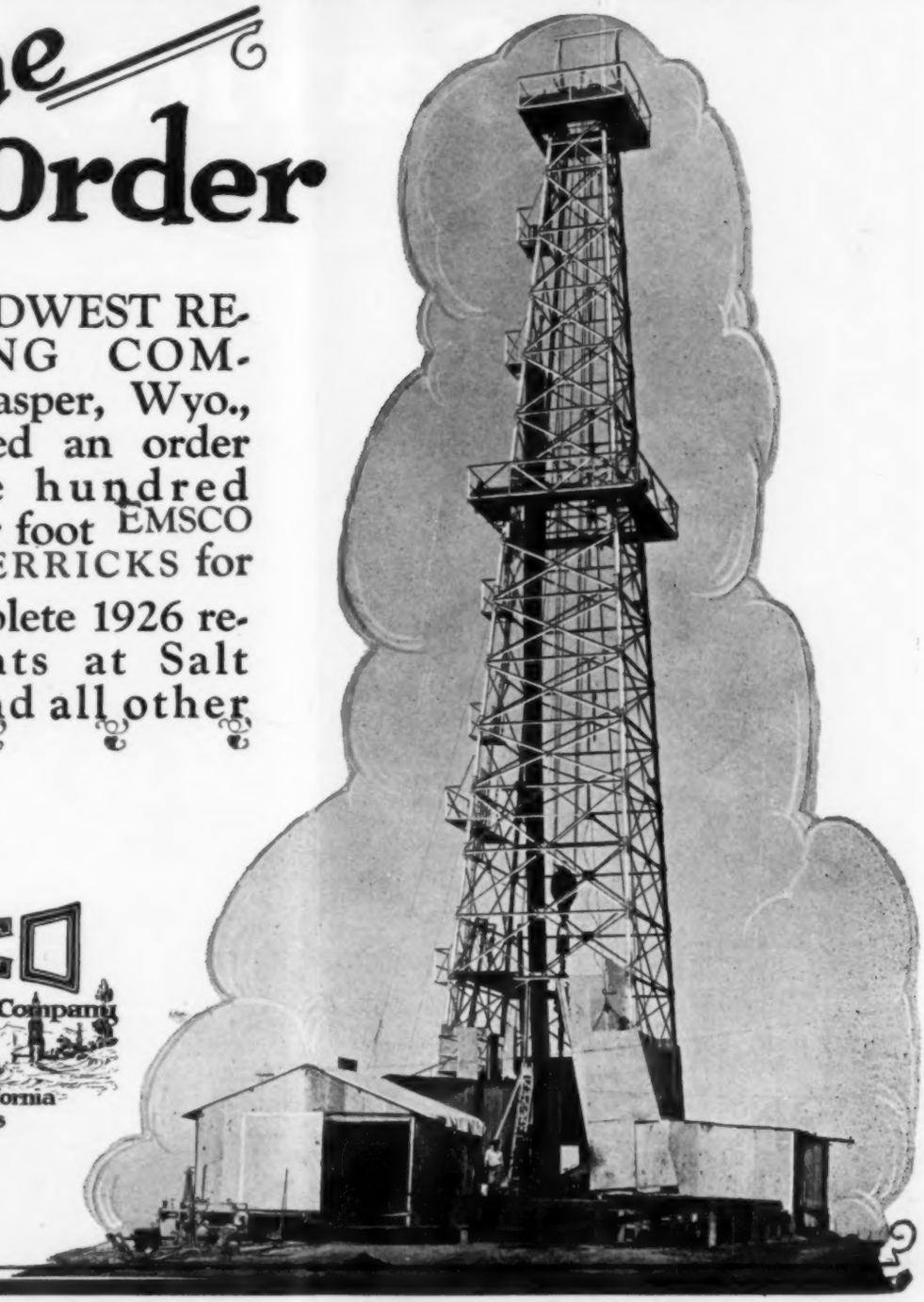
NEW YORK HOUSTON LOS ANGELES

REED ROCK BITS

EMSCO
A Complete Line of Better Oil Well Equipment

Three Hundred
Emsco Steel Derricks
in one Order

THE MIDWEST REFINING COMPANY, Casper, Wyo., have placed an order for three hundred eighty-four foot EMSCO STEEL DERRICKS for their complete 1926 requirements at Salt Creek, and all other fields.



EMSCO
Derrick & Equipment Company
Los Angeles ? ? California
Houston ? ? Texas

Say you saw it in The OIL WEEKLY

74

Years of Service

With the passage of 1925, the Jarecki Manufacturing Company completes its seventy-fourth and begins its seventy-fifth year of service.

Viewing ourselves in retrospect, we feel both old and young: old in experience and judgment, but young in open-mindedness and in vigorous service ideals.

If there is any one truth that our seventy-four years has taught us, it is that the way to success is through the gate of service; and in 1926, as in all the preceding years, we dedicate ourselves to a continuance of the kind of dealings customers have come to expect from JARECKI since the days when high hats and nankin pantaloons were part of the American gentlemen's regular street attire.

This is the way folks dressed when the Jarecki Company was founded.

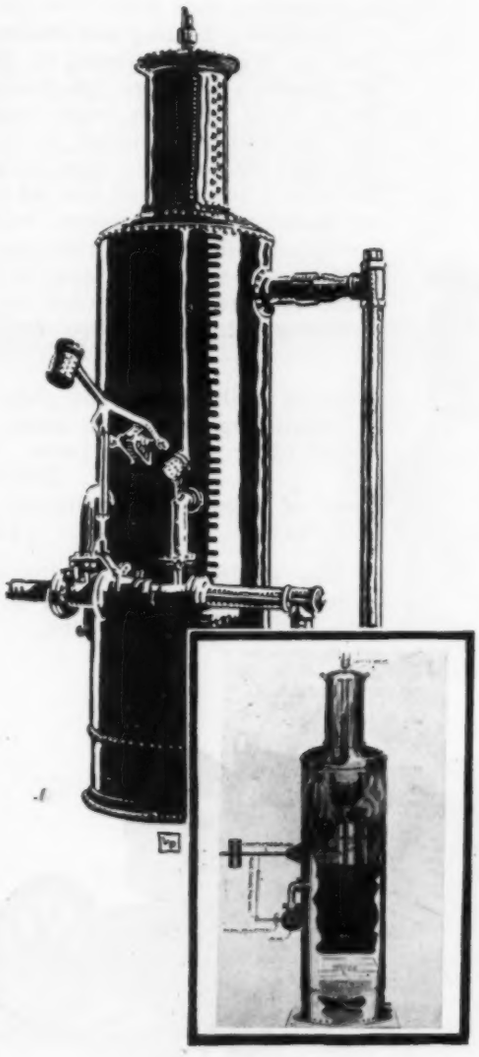
Jarecki

MANUFACTURING COMPANY

ERIE, PA., U. S. A.

ST. LOUIS PITTSBURGH EL DORADO TULSA EASTLAND

the choice of the foremost producers



The Lorraine GAS and OIL SEPARATOR

It is a significant fact that the most successful operators in all fields use Lorraine Separators. Most of these operators have adopted, and standardized on Lorraine Separators after exhaustive tests in comparison with other types.

The Lorraine Separator is a portable unit, very compact, easy to install, and can easily be moved from one place to another. It attains remarkable efficiency and increases production by allowing a steady, natural flow of oil at all times; by recovering all the gas; by delivering only clean gas into the gas line and clean oil into the oil line; through the complete and positive automatic control of the gas and oil outlet valves; by the clean separation of gas and oil through the automatic action of the gas and oil valves; and through the elimination of practically all evaporation losses.

Lorraine Separators are the best built equipment of this type manufactured today. They have proved their superior quality, efficiency, and economy in nearly every field in the world, in competition with all others, and are sold on an absolute guarantee of higher efficiency and greater economy in operation—a guarantee which protects you fully. Write for complete descriptive catalog, with test and service records in all fields.

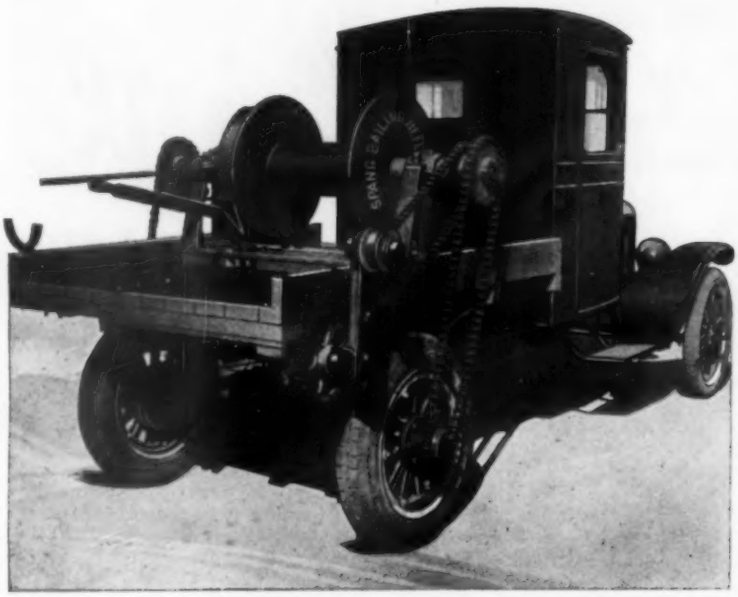
THE LORRAINE CORP.
MANUFACTURERS AND DISTRIBUTORS
OIL WELL SPECIALTIES
110th and Alameda Streets
Los Angeles, Calif.

Oklahoma Branch:
The Lorraine Corporation
406 West First St.,
Tulsa, Oklahoma.

Export Distributors:
Buck & Stoddard, 30 Church St.,
New York City.

SPANG

BAILING AND PULLING REELS



The Spang Bailing and Pulling Reel or Winch illustrated to the left, shows a complete attachment for a Ford one ton truck—that can be readily mounted or dismounted by any field man. Can be quickly transported and set up at location;—is equipped with hardened roller chain drive—permitting any speed changes—with asbestos lined disc clutch and brake—and has ample line capacity.

Price of Bailing Reel complete —including sprockets, chain and other necessary parts $375.00

Price of Spudding Attachment, Extra 75.00

Also made for installation on other cars and trucks and in a smaller size for light cars.

The Spang Bailing and Pulling Reel or Winch can also be obtained as a complete attachment for a Fordson Tractor. Any lease mechanic can attach quickly without special tools or knowledge of the equipment. Its all steel construction imposes no additional load on tractor body as the tractor is carried by the underframe. Wheel base is lengthened, load is distributed—hardened roller chain drive permits many speed changes—ample line capacity assured.

Price F. O. B. Butler, Penna... $450.00

SPANG and COMPANY

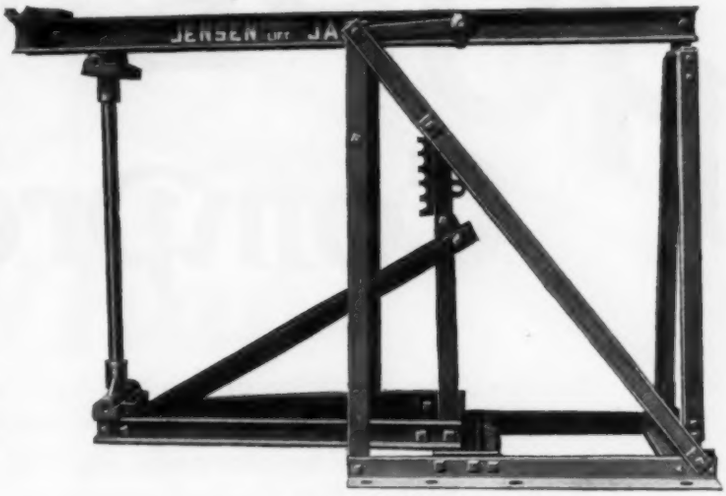
Butler, Penna.

"For Sale by Supply Dealers in all Fields"

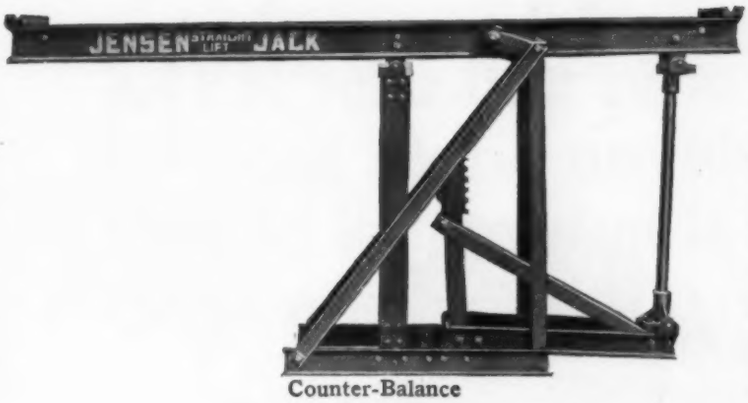
The Jensen Straight Lift Jack—Improved Model

Constructed much the same as the JENSEN JACK Regular with the same length of stroke, the Improved Model is designed for continuous pumping work. It is much heavier with large bearings and huge oil pockets and the frame is rigid with ample base to insure bolting to foundation.

The V is built in self-supporting style with 22 inch by 3½ inch saddle bearings. The step box carries 10 inch by 3 inch bearings with large oil pockets. The pitman is built with safety design.



Improved Model



Counter-Balance

The Jensen Straight Lift Counter-Balance

This is an extremely heavy type, similar to the Improved Model, with maximum stroke of 28 inches. It is built to lessen wear and tear on machinery through use of a counter-balance to balance rod in the well. This JENSEN JACK is suitable for deep well pumping.

A practical, straight-lift stroke of 28 inches is obtained with this jack which is more than the ordinary Jack usually gives.

A lighter Counter-balance Jack will be ready for the market shortly.

Jensen Straight Lift Frame

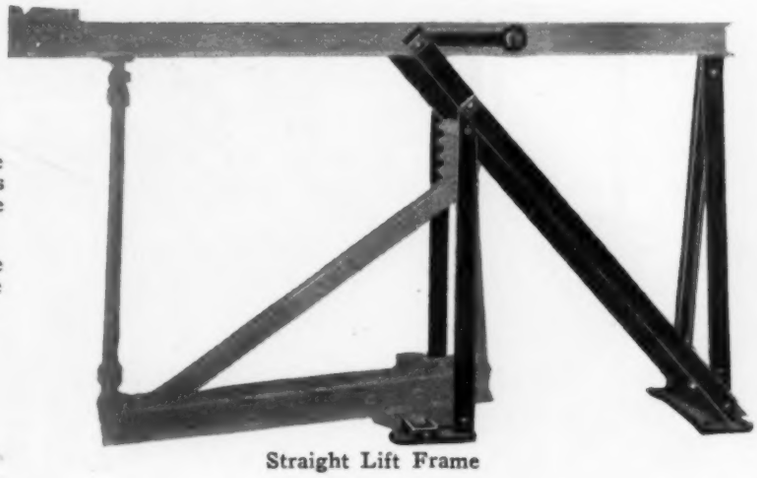
For Use on Oklahoma Jacks

This Frame gives a straight-lift to the regular Oklahoma jack. Eliminates leaky joints and stuffing box trouble and requires less power to operate.

This Frame has been built in response to a demand for durability, longer life and easier operation.

Our Latest Catalogue Will Be Sent on Request.

The Jensen Straight Lift Jack



Straight Lift Frame

Manufactured By

Jensen Brothers Manufacturing Company

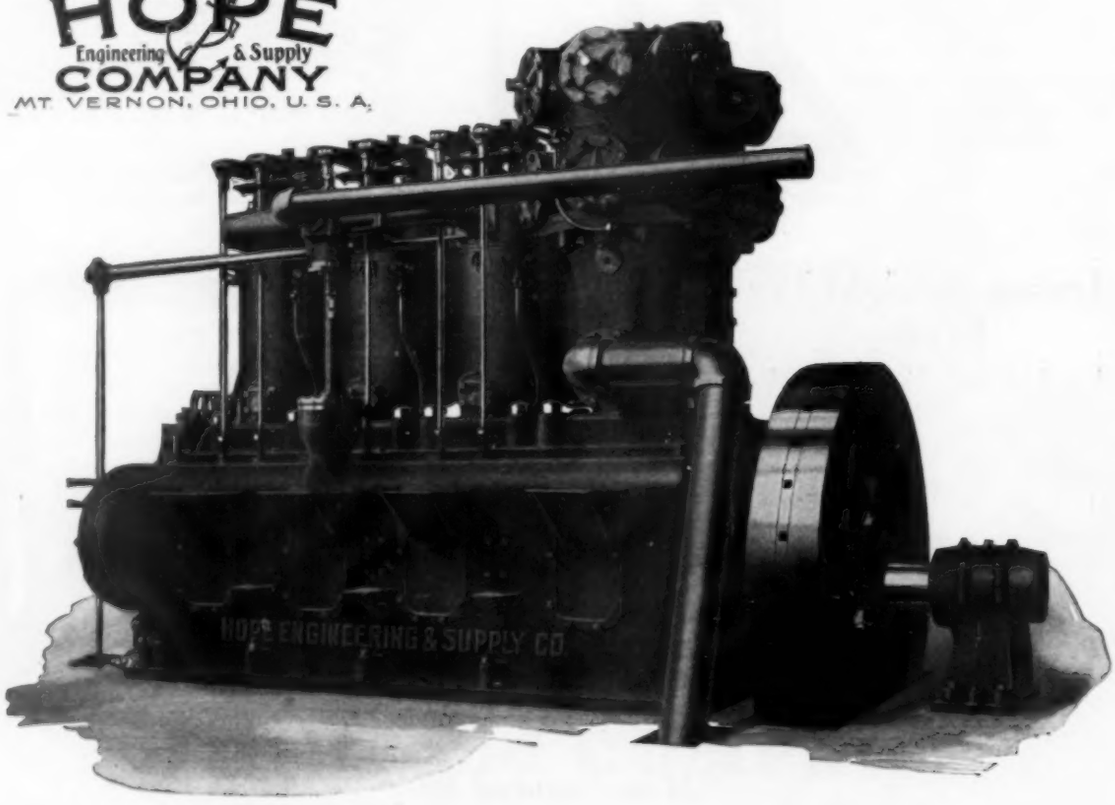
Nowata, Oklahoma

HOPE Vertical Compressors

You want the maximum of economy—the utmost in reliability—the latest improvements of up-to-date practice—the minimum plant investment per unit of compressing capacity. You'll get them all, in the Hope Vertical Gas Engine-Compressor. You cannot invest your capital, in a compressor plant, to better advantages than in an equipment of Hope Verticals.

Our engineers are ready at any time to go into details with you. Tell us your requirements.

HOPE Engineering & Supply COMPANY
MT. VERNON, OHIO, U. S. A.



HOPE **ENGINEERS & CONTRACTORS IN NATURAL GAS AND OIL** HOPE

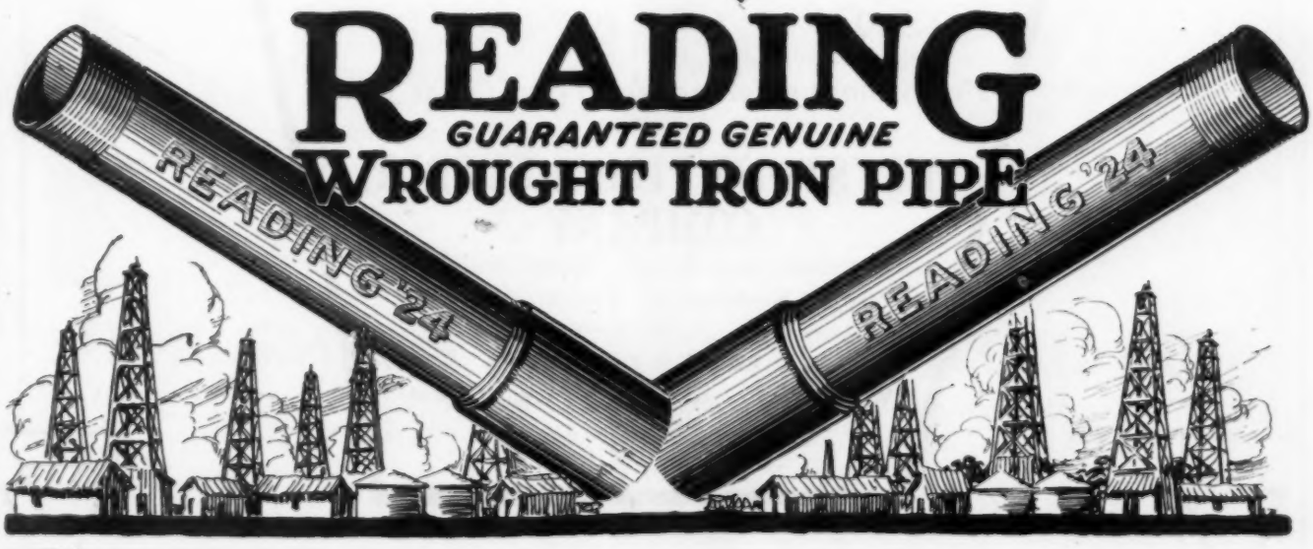
Say you saw it in The OIL WEEKLY

What Does It Cost To Drop a String of Tubing?

MEN who buy pipe on <u>first</u> cost alone are always the first to learn what it costs to drop a string of tubing.

READING IRON COMPANY
READING, PENNA.

OIL WELL SUPPLY CO., Distributors



READING
GUARANTEED GENUINE
WROUGHT IRON PIPE

Say you saw it in The OIL WEEKLY

KEYSTONE

A Symbol of
Service
Quality
Satisfaction

Economy has been the by-word since the beginning of the re-adjustment period. Buying used pipe that will serve the purpose of new is economy. Inspect the following in our yards and save the difference.

50,000	ft.	2″	Used	line	pipe
35,000	"	2½″	"	"	"
30,000	"	3″	"	"	"
25,000	"	4″	"	"	"
30,000	"	6″	"	"	"
15,000	"	8″	"	"	"
15,000	"	5-3/16″	17 lb.	used	casing
5,000	"	6-5/8″	24 lb.	"	"
6,000	"	8-1/4″	32 lb.	"	"
3,500	"	10″	35 lb.	"	"
6,000	"	10″	40 lb.	"	"
3,000	"	12½″	50 lb.	"	"
1,500	"	15½″	70 lb.	"	"

For prompt shipment from our Texas yards

KEYSTONE PIPE & SUPPLY COMPANY

Eastern Headquarters: Butler, Penna.
Western Headquarters: Fort Worth, Texas.
315 W. T. Waggoner Bldg.

BRANCH STORES:
Wichita Falls, Holliday, Vernon, Breckenridge, Texas

Why GROPE in the DARK?

"Know Your Hole"

In modern industrial practice hundreds of thousands of dollars are expended to eliminate guess work in actual operations. Extensive tests are made; experimental work is carried on; fabulous salaries are paid to men who can visualize and see into the future.

The PHIPPS CORE BIT

In oil well drilling the Phipps Core Bit is the visualizer that virtually enables you to look right down into the hole any time and see the formation which your bit is going through. It's the device that makes it possible for you to "know your hole" and PLAN your operations intelligenty, efficiently, successfully. It eliminates guesswork, groping in the dark, and taking chances. It's a million dollar employee at an ordinary laborer's wage.

The Phipps Core Bit is the simplest of all coring devices. It is designed and built for use by your own crew. No so-called highly skilled "coring experts" are necessary to obtain successful results. Your own crew can take perfect cores, and be sure of results, because it is a scientifically designed tool built for that purpose, and not a complicated device. Its extreme simplicity insures success. It is guaranteed, and we'll be glad to demonstrate is efficiency for you any time convenient.

"Eliminate the Guess from Oil Well Drilling"

H. C. SMITH MANUFACTURING CO.

WHITTIER, CALIFORNIA, U. S. A.

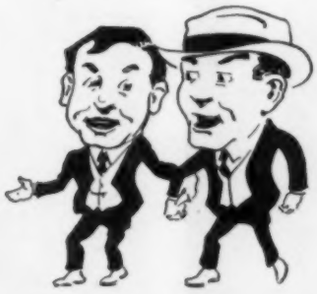
Branch Office and Warehouse: Taft, California.

HARRY B. SHINE, Sales Agent, 2408 McKinney Avenue, Houston, Texas

Mid-Coninent Distributors: Frick-Reid Supply Company

ALL OTHER SUPPLY HOUSES

The little DEVILS ARE AT WORK
STOP!
THIS ABUSE
USE
FEDERAL BELT
CLAMPS
THIS IS AN OLD STYLE CLAMP
FINE PICKINS EH?
T'IS SO!
No belt in the world will stand the cutting and abuse to which the old style straight bar belt clamp subjects it.
But with the
Federal Belt Clamp
the curve on the clamp fits the crown on the pulley and eliminates the destructive cutting and hacking when the clamp strikes the pulley—lengthening the life of your belt.
IT'S THE ABUSE NOT
THE USE OF YOUR BELT
THAT COSTS YOU MONEY.
The
FEDERAL
SUPPLY Co.
TEXAS
FORT WORTH, MEXIA



Be Careful This Time

YOU are possibly starting the new year off a little differently than you did last January.

Little do we realize that those things we do just several times develop into almost daily habits.

Check up now on daily work and customs of last year. Some can be improved—maybe a habit or two that just developed by being crowded with work—or some you've intended correcting but time just got the best of you.

New year resolutions mean little unless they are good ones.

Here's one that will hold up.

Try our "service with a smile" on those hard ones—watch how smoothly it works. Then let ordering from Hercules develop into a habit. It'll prove to be a big time saver for 1926.

"Service With a Smile"

HERCULES SUPPLY COMPANY

Stores
Corsicana
Mildred

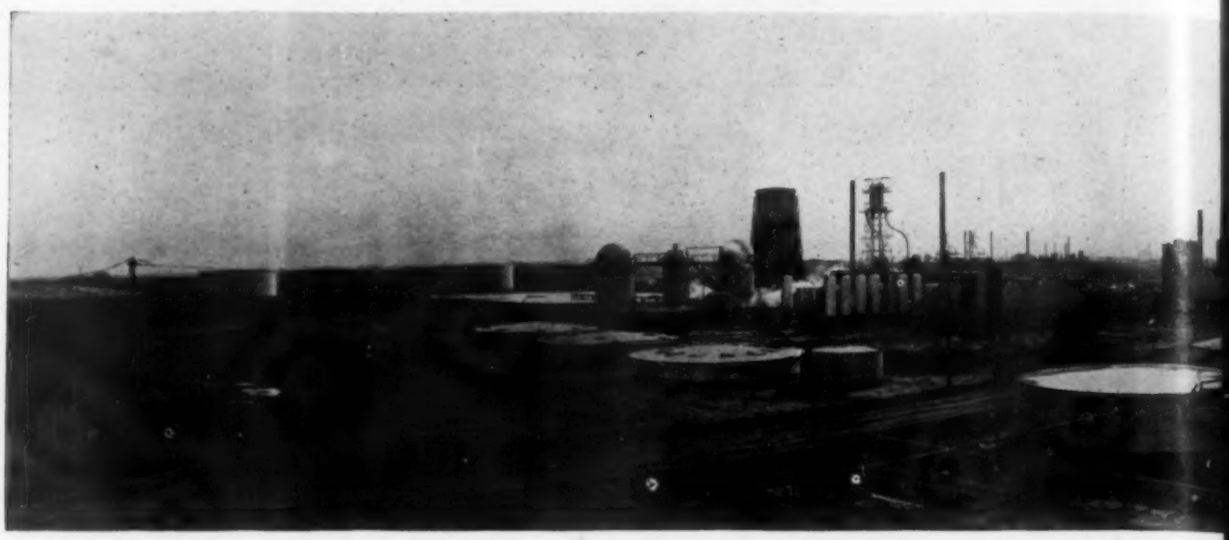
Hercules Supply Co.

Stores
Vernon
Wortham

J. T. McCarthy, Jr.
Santa Fe Building
DALLAS

Say you saw it in The OIL WEEKLY

Panoramic View of Our Modern



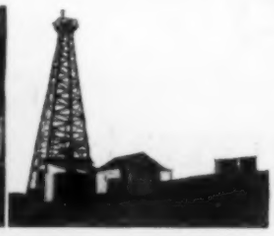
FROM WELL

Oil is produced from 210 wells owned by the miles of our own pipe line, refined at Wichita Fa tions in Texas, Arizona, New Mexico, Mississi

Manufacturers of

U. S. Government Aviation Gasoline
U. S. Motor Gasoline
Panotine—A high grade turpentine substitute
Panoclean—An especially adapted product for cleaners and dyers
Stove Distillates—Low flash and fire tests, zero cold test.
Fuel Oil—Zero cold test.

One of our flowing wells



The same well shut in and equipped for pumping

We Solic

PANHANDLE RE

Wichita

Located at Wichita Falls, Texas

TO CONSUMER

any, transported through over one hundred
d marketed through our own distributing sta-
d by a large number of independent jobbers.

Boiler and Tank Department

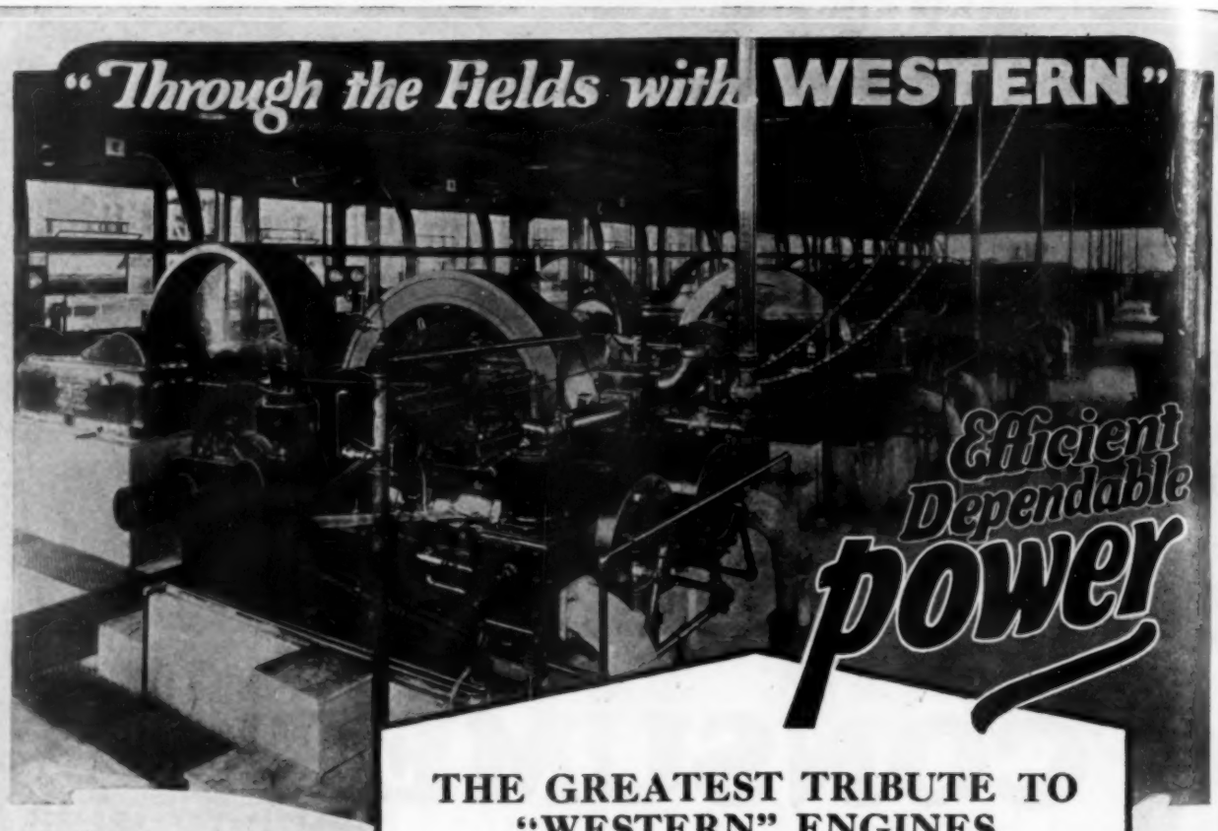
Designors, Erectors, Fabricators of
Structural Steel and Iron, Riveted, Welded and
Bolted Steel Storage Tanks
Boilers, Stills, Condenser Boxes
Towers and Other Refinery Equipment
Water Softeners
Repairers of Tank Cars

Inquiries

ING COMPANY

Texas

Station No. 1, Wichita Falls, Texas



THE GREATEST TRIBUTE TO "WESTERN" ENGINES

During our entire experience in building internal combustion engines of various types we have found that the highest achievement of any power plant in any character of service is, simply, ***efficient, dependable power.***

For almost half a century "Western" has striven unceasingly to attain this perfection in "Western" Engines. And their performance in all branches of oil country work during this entire period has fully justified our efforts along this line.

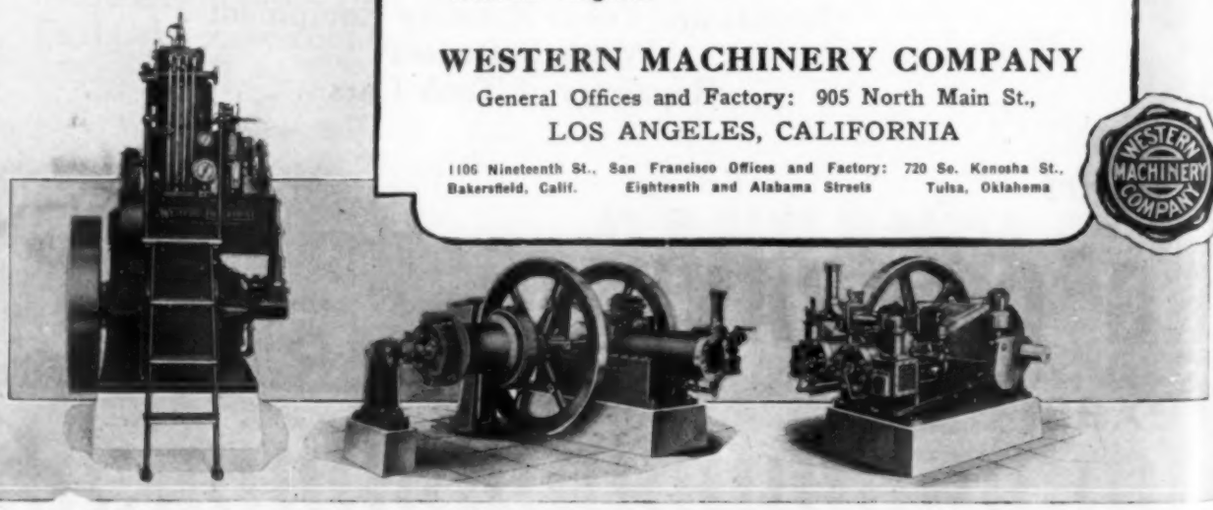
"Western" Gas Engines have earned a reputation for efficient, dependable performance in oil country work that is world-wide in scope. The phrase "efficient, dependable power" has, in reality, come to be synonymous with the name "Western" Engines. And this, it seems to us, is the greatest tribute that the petroleum industry can pay to "Western" Engines.

There's a "Western" Engine built especially for very individual requirement in oil country work, from small gas engines for pumping to full-Diesel units for central station service. Write for catalog, stating the particular power requirements involved.

WESTERN MACHINERY COMPANY

General Offices and Factory: 905 North Main St.,
LOS ANGELES, CALIFORNIA

1106 Nineteenth St., Bakersfield, Calif. San Francisco Offices and Factory: Eighteenth and Alabama Streets 720 So. Kenosha St., Tulsa, Oklahoma

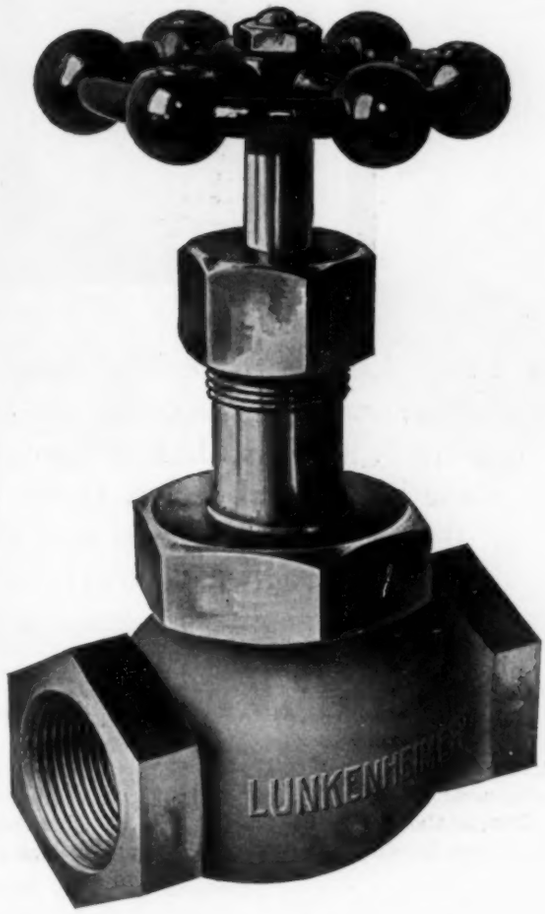


Year After Year

LUNKENHEIMER
Bronze Regrinding Valves

continue as the choice of thousands of valve users who are interested primarily in performance facts.

The inherent quality that promptsreorder after reorder for Lunkenheimer Valves is a reliable guide for all who seek dependable and economical valve service.



Lunkenheimer Bronze Regrinding Valve
Inside Screw, Union Bonnet, ⅛ to 4 in.
Outside Screw and Yoke, 1½ to 6 in.
Working steam pressures up to 300 pounds.

Lunkenheimer Distributors, located in all industrial centers, carry large stocks, and render prompt service. Call on them when in need of Valves, Boiler Mountings, and other Engineering Appliances.

Complete information is contained in Lunkenheimer Regrinding Valve Booklet F. 517. J K. A copy will be sent upon request, without any obligation on your part.

JUST FILL IN AND MAIL THE COUPON.

THE LUNKENHEIMER CO.
"QUALITY"
CINCINNATI, OHIO, U. S. A.
NEW YORK CHICAGO BOSTON LONDON
EXPORT DEPT. 129-135 LAFAYETTE ST., NEW YORK

BRONZE
Regrinding Swing Check Valve

THE LUNKENHEIMER CO. P. O. Box 878, Cincinnati, Ohio
"QUALITY"
Gentlemen:—Please send me, without obligation, a copy of your Regrinding Valve Booklet F. 517.
Name .....
Firm .....
Address .....

3-39-90

Now Being Manufactured Out of Cast Chrome Vanadium Steel

Can Now Be Had in Two Sizes— Five Foot or Six Foot Length Stroke

The Fetty Long Stroke Pumping Attachment from the very start has been an outstanding success. Its performance in the field has been uniformly successful. Improvements made include Cast Chrome Vanadium Steel gears, three braces on each side of pitman flange instead of one and the two connecting rod bolts long enough to allow running nuts up to end of bolt to allow pitman gear to drop low enough to permit pulling of wells. Same practical design and sturdy construction.

R. G. Garretson,
771 Raymond Avenue,
Long Beach, California
Telephones 333-433

Robert J. Miller,
18 North Louisiana St.,
Houston, Texas
Telephone Preston 2841

R. N. Atmore,
1307 South Florence Place,
Tulsa, Oklahoma.
Telephone 3-4815

Covered by United States and Foreign Patents

FETTY

LONG STROKE

Say you saw it in The OIL WEEKLY

Jefferson Makes *ONLY* Unions and Flanges

Unions and Flanges are not a side-line nor one of many products, with JEFFERSON. They constitute the sole product of the large JEFFERSON plant. Not merely the "Best Thought" of the manufacturers but ALL of their thought goes into making JEFFERSON Unions and Flanges the best money can buy. Patented seat ring construction. Absolutely non-leakable ground ball joints. The world's largest selling Unions and Flanges.

"If CONTINENTAL Sells It There Is No Better"

THE CONTINENTAL SUPPLY COMPANY

General Offices: St. Louis.
Export Offices: 2 Rector St., New York.
London Offices: 316-317 Dashwood House, Old Broad Street, London E. C. 2, England.
MORE THAN 70 STORES IN THE OIL COUNTRY

CONTINENTAL

Say you saw it in The OIL WEEKLY

Landreth Oil Corporation

Petroleum Products

Operating Subsidiaries

Landreth Production Corporation
Landreth Gasoline Company
Landreth Gas Company

General Offices

First National Bank Building
Breckenridge, Texas

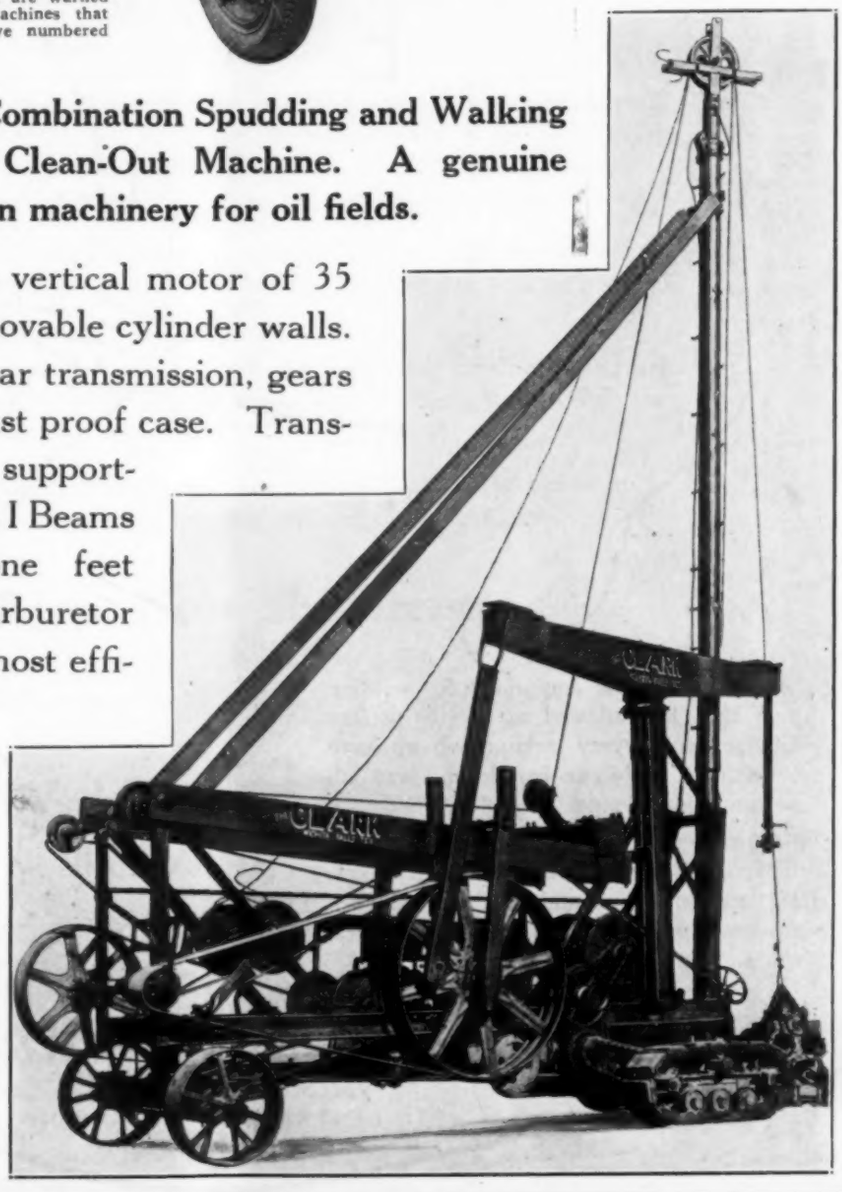
The Clark Drilling and Clean-Out Machine and Tractor Winch

Several hundred of these winches have been used for pulling rods, tubing and bailing wells for years with perfect satisfaction. Drum capacity 2500 ft. ½" line, 3500 ft. 7/16" line.

Fully covered by patent No. 1,512,199, issued October 21, 1924, and all persons are warned against maufacturing or using machines that are an infringement on the above numbered patent.

The Clark All Steel Combination Spudding and Walking Beam, Drilling and Clean-Out Machine. A genuine masterpiece of modern machinery for oil fields.

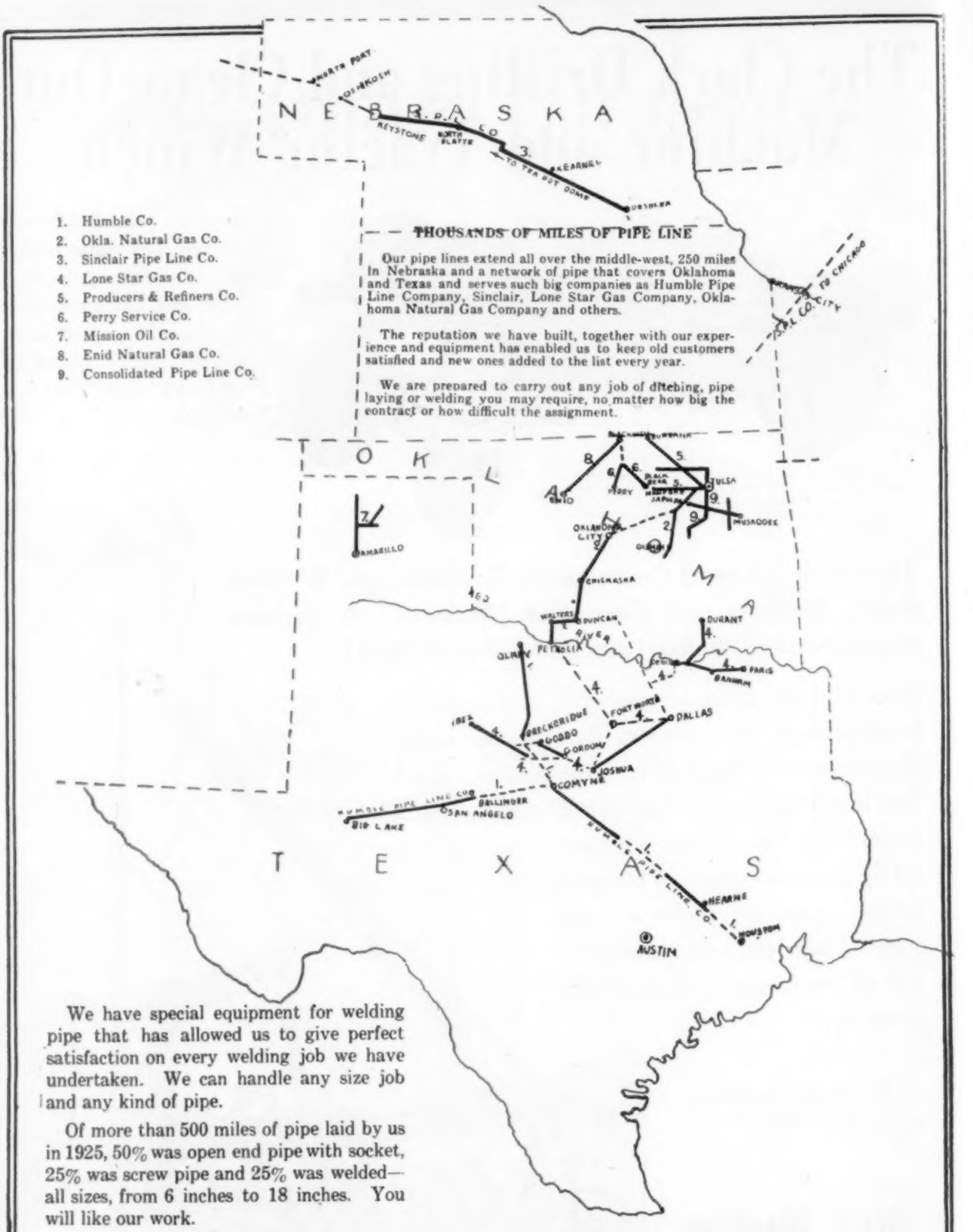
Special four cylinder vertical motor of 35 horsepower, with removable cylinder walls. Special heavy spur gear transmission, gears run in oil tight and dust proof case. Transmission and motor are supported by the heavy 8-inch I Beams which are twenty-one feet long. Magneto and carburetor are of the latest and most efficient type.



Write for detailed information

Clark Machine Company

Wichita Falls, Texas



1. Humble Co.
2. Okla. Natural Gas Co.
3. Sinclair Pipe Line Co.
4. Lone Star Gas Co.
5. Producers & Refiners Co.
6. Perry Service Co.
7. Mission Oil Co.
8. Enid Natural Gas Co.
9. Consolidated Pipe Line Co.

THOUSANDS OF MILES OF PIPE LINE

Our pipe lines extend all over the middle-west, 250 miles in Nebraska and a network of pipe that covers Oklahoma and Texas and serves such big companies as Humble Pipe Line Company, Sinclair, Lone Star Gas Company, Oklahoma Natural Gas Company and others.

The reputation we have built, together with our experience and equipment has enabled us to keep old customers satisfied and new ones added to the list every year.

We are prepared to carry out any job of ditching, pipe laying or welding you may require, no matter how big the contract or how difficult the assignment.

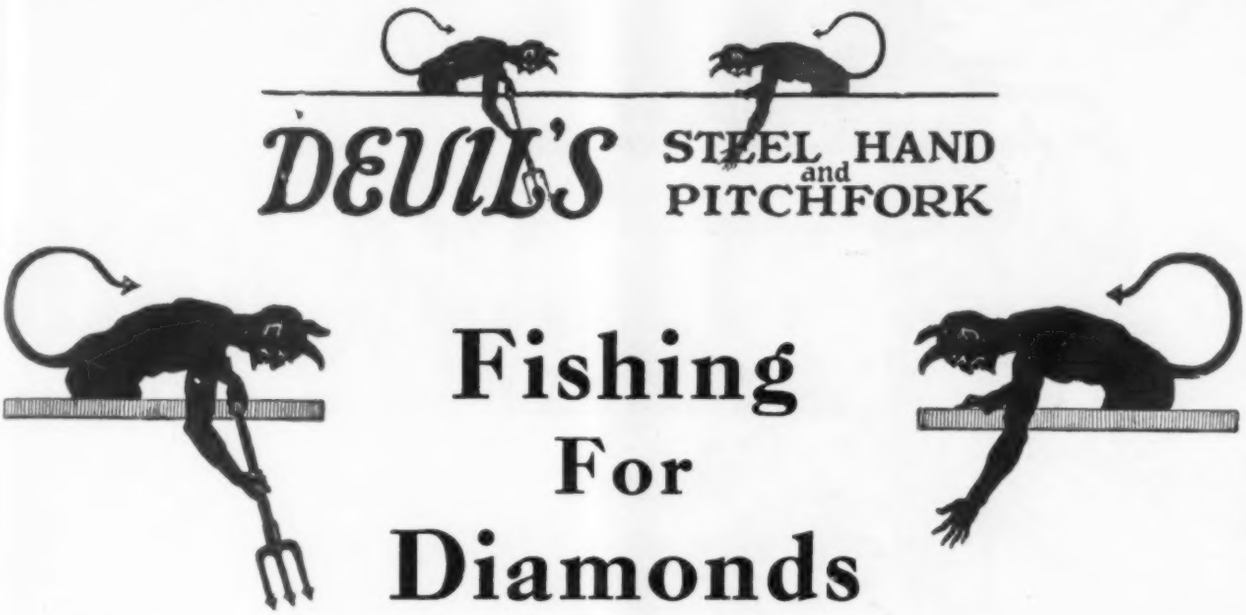
We have special equipment for welding pipe that has allowed us to give perfect satisfaction on every welding job we have undertaken. We can handle any size job and any kind of pipe.

Of more than 500 miles of pipe laid by us in 1925, 50% was open end pipe with socket, 25% was screw pipe and 25% was welded—all sizes, from 6 inches to 18 inches. You will like our work.

The Oklahoma Contracting Co.

Tulsa, Okla.

214 CENTRAL NATIONAL BANK



DEVIL'S STEEL HAND and PITCHFORK

Fishing For Diamonds

Devil's Pitchfork

Last March we furnished The Marland Oil Company at Terrell, Texas, on order of Mr. L. J. Snyder, Superintendent of the Core Drilling Department, a small DEVIL'S STEEL HAND for fishing a diamond core bit that cost $2500.00. The bit was fished without difficulty.

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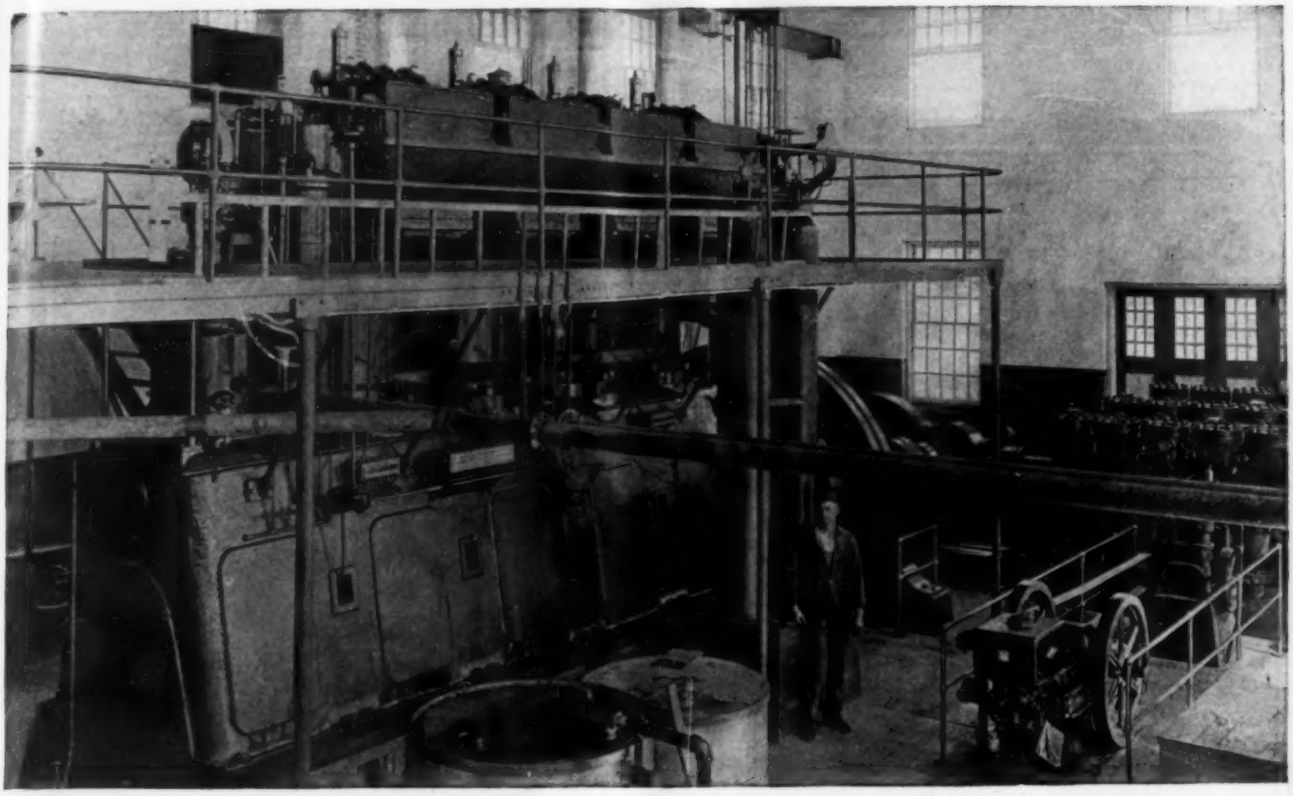

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LE BUS ROTARY TOOL WORKS

ELECTRA, TEXAS

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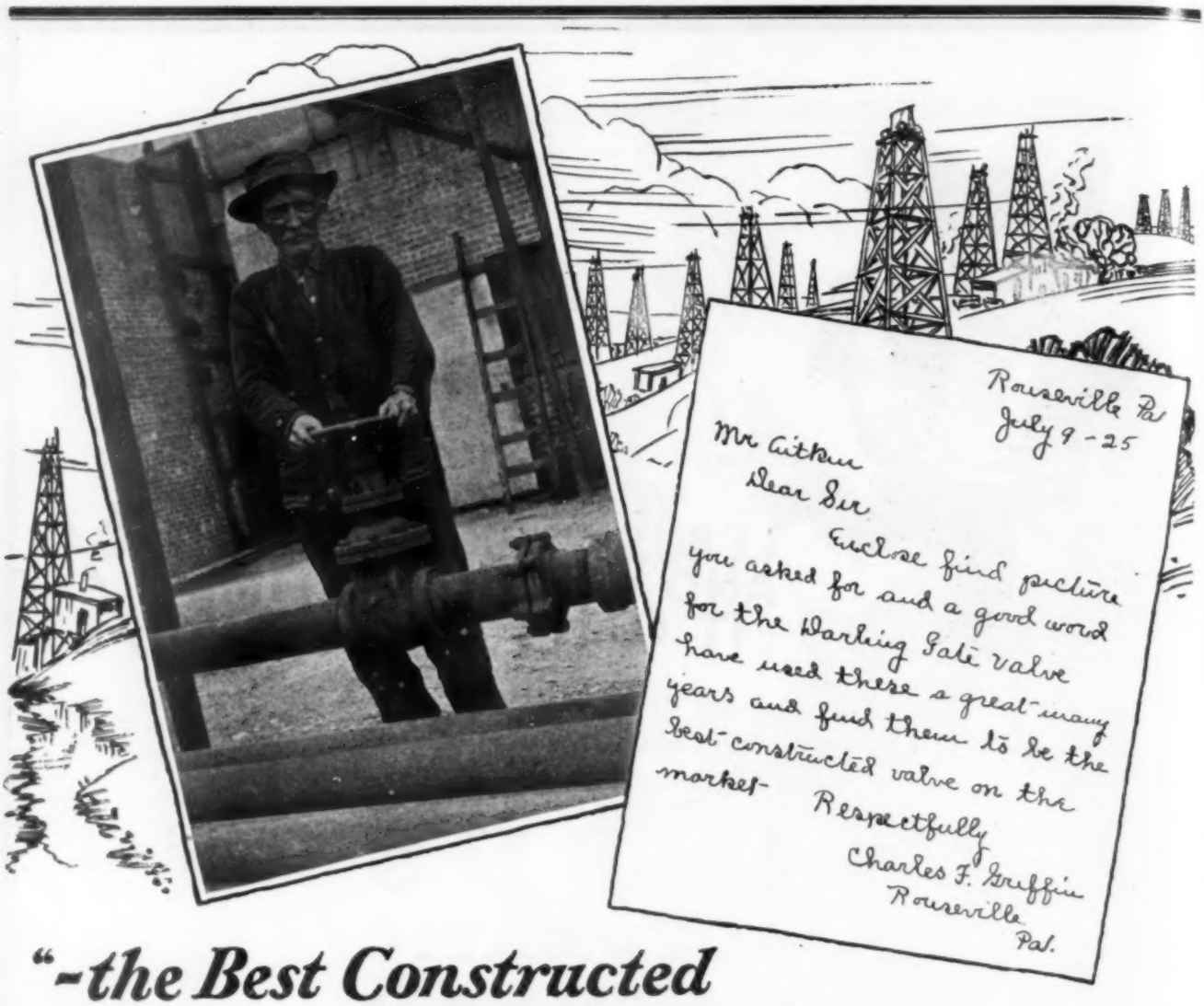
Rouseville Pa
July 9 - 25
Mr Aitken
Dear Sir
Enclose find picture you asked for and a good word for the Darling Gate Valve have used there a great many years and find them to be the best constructed valve on the market
Respectfully
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Rouseville
Pa.

"-the Best Constructed Valve on the Market!"

If expert testimony is needed on the worth of Darling Gate Valves, surely Charles F. Griffin, pumper at the Rouseville, Pa., refinery of the Pennzoil Refining Co. is qualified to give it.

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California Distributor
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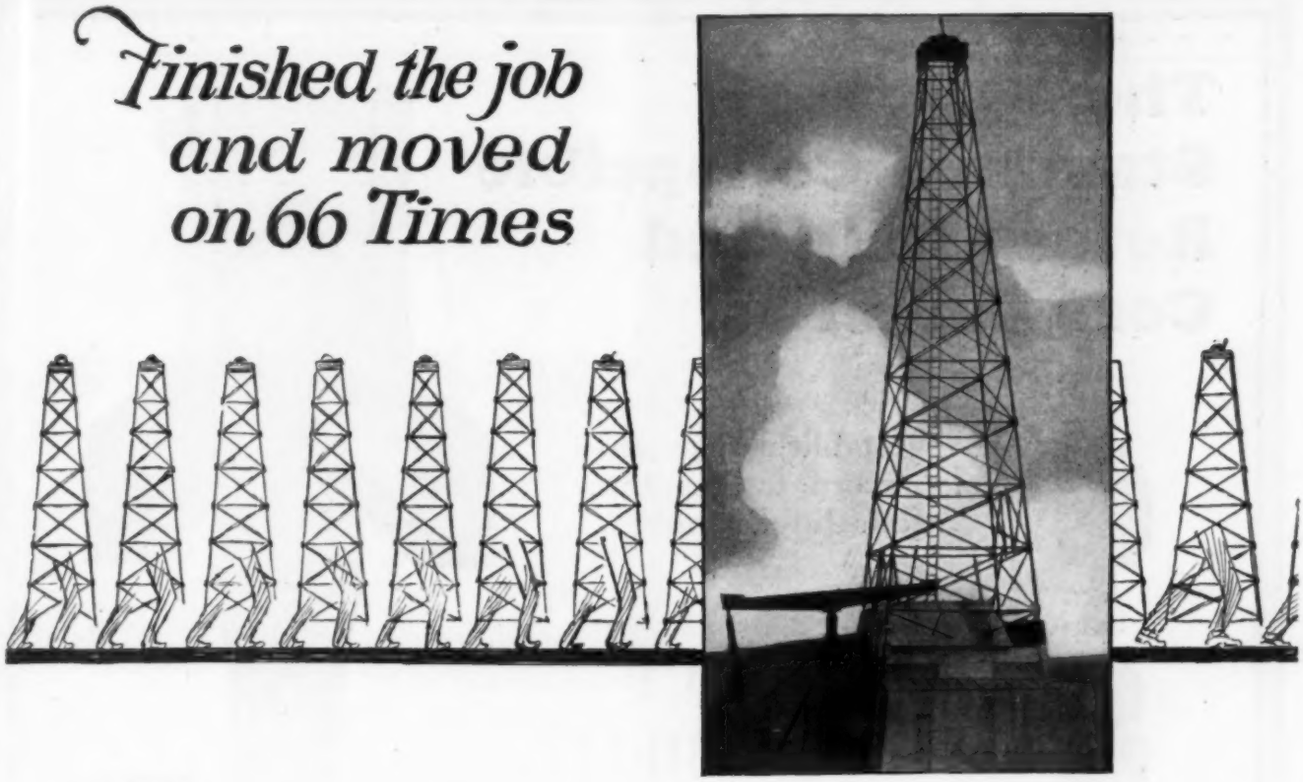
DARLING GATE VALVES

Finished the job and moved on 66 Times



AT a total cost of $25 for repairs—a few bolts had to be replaced now and then—a Moore Derrick was kept in operation more than a dozen years and, when last heard from, was still going strong, with 66 completed wells to its credit.

It was estimated that the cost of wood derricks if they had been used to accomplish the same work, would have been at least $25,000. It is doubtful if any other than a Moore Derrick, of whatever material, has ever established such a record.

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EFFICIENCY
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RAPID DRILLING

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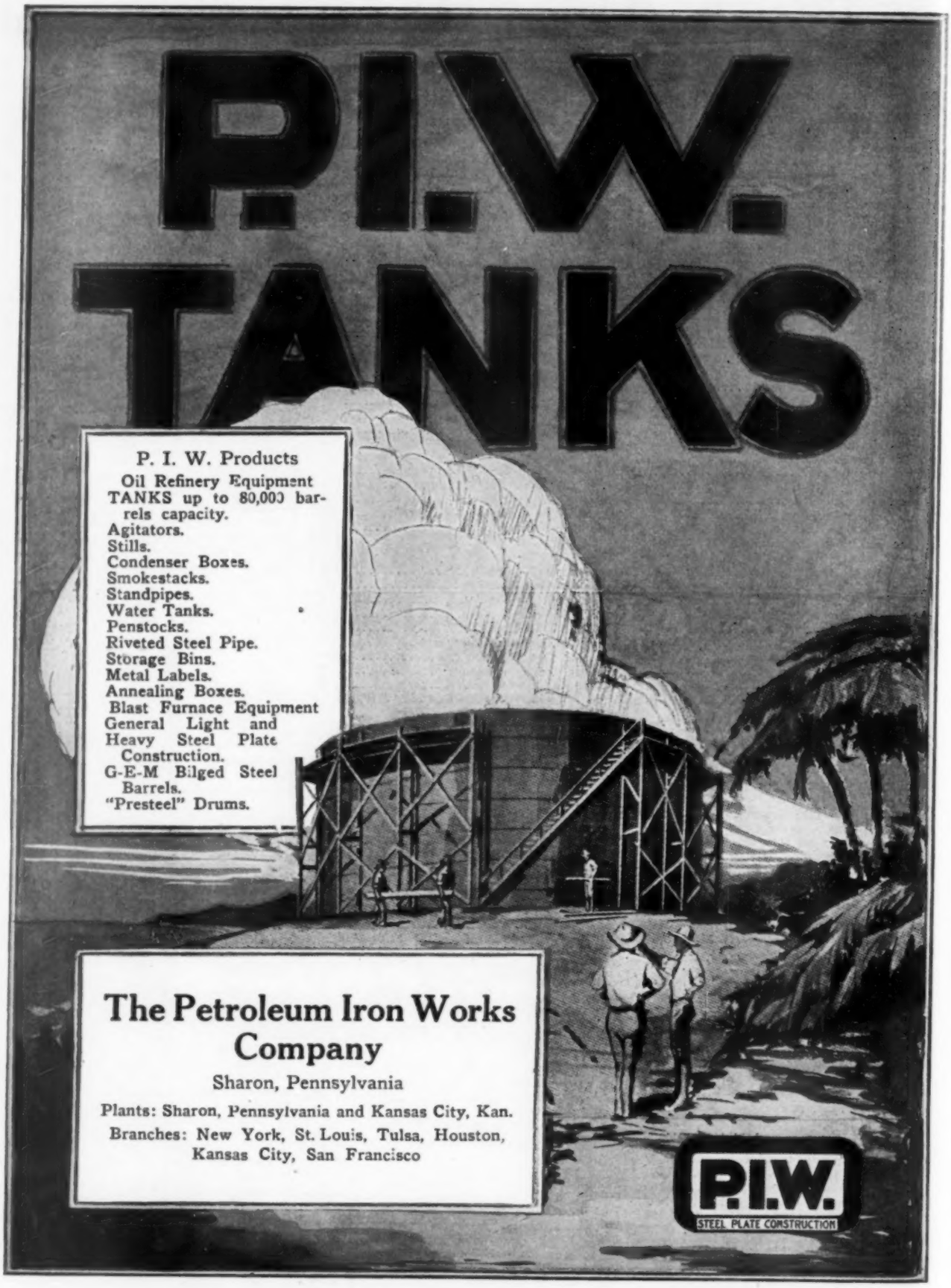

P. I. W. Service Is World-Wide

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The OIL WEEKLY

January 15, 1926 Volume 40, Number 4

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1. 2. 3. 4. 5. 6. 7.
TRANSIT

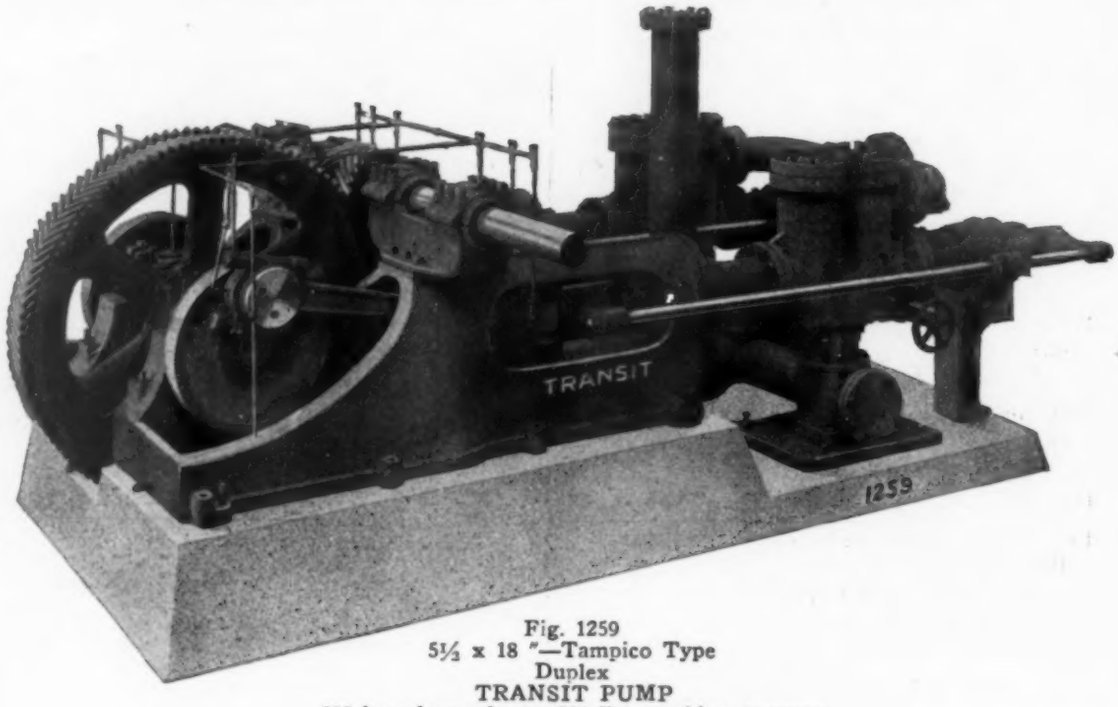

Fig. 1259
5½ x 18 "—Tampico Type
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3. Low Clearance—no air pockets. Fluid travels in a continuous direction.
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EDITORIAL COMMENT

Local Color

IT appears quite fitting that the American Petroleum Institute should hold its meeting to consider committee recommendations on standardization of field equipment in Los Angeles. California has done much to bring tools and methods to present day efficiency, for in no quarter of the world has the development of oil properties been carried on more scientifically.

The nature of the work to be done has fostered better tools, better methods and better men to bring the oil to the surface. Drilling to depths greater than was conceived possible only a short time ago, has called for engineering skill which would have been useless unless backed up by good tools and appliances which are a part of that engineering skill. Conditions under which wells have been drilled and the formations through which they go are such that to have stood the test of such service is a recommendation that any manufacturer has been proud to claim for his product, whether east or west. and in their own state Californians have built up an oil field machinery industry that keeps step with the development in the fields, or perhaps is ahead of the industry itself as compared with similar developments in other sections. From these machine shops have come tools and ideas which have made possible the drilling of deep holes in California which have had a distinct bearing on the future oil supply of the world, as California has led the way in exploring the deeper regions of the earth.

Location and the proverbial prejudice of Californian's in favor of their State have served to bring the industry in the west into closer cooperation than has been in other sections of the country—the oil men of California get together oftener and match experiences in a spirt of helpfulness more so than do the operators in the East. This State pride and locations of fields often in bits of country that have been noted over the world for their beauty, has served to make the California fields more sightly because they are kept that way. Unconsciously this has led to greater efficiency in the men who work in the fields, because of the incident comforts of their surroundings.

Meetings in Los Angeles, then, to select tools upon which the industry may standardize for its work, is much like holding such a meeting in a testing laboratory. If the tools have stood the gaff in California it only remains to learn that they can be adapted to other fields and their efficiency has been proven.

* * *

Another thing which makes a visit to California by a representative delegation of oil men from other parts of the country opportune is the influence which that section has upon world oil conditions. Until recently California has been a separate and distinct area as affected the industry of the United Sates. The fields of the Pacific Coast furnished oil for the needs of its own people, it was refined in their own refineries and distributed up and down the coast in their own lines and tankers, or exported to the ports of the Pacific. But recent months have shown that it is possible for the producers of California to meet the oil from the Mid-Continent far into the interior from the North Atlantic seaboard, as well as at every point on this continent at which tankers touch.

Right now this influence is being felt in the Mid-Continent where producers are divided in opinion as to whether they would rather sell their oil at present prices, or have those prices increased to permit competition from the water shipments from the Pacific. To be on the ground in California will give these producers a much better idea of what California means to them than would be possible to get in any other manner.

In addition to this the Californians have their peculiar problems in the recovery and handling of oil the same as the operators in the several Eastern sections have theirs. and each have developed their own methods of handling them. An observation of how the other fellow is doing things is always profitable.

Give Them Facts

TAKING it for granted that any company which is worth rumors of consolidation has knowledge that morale is a valuable asset whether or not they can show it on the balance sheet when they talk to the proposed buyer. Business experts have talked too long and too wisely of the cost of labor turn-over but that it is known that there is a real cost there.

With these things in mind, executives of the companies which are so much involved in rumors of consolidations, would do well to take their men in confidence in such instances. If the rumor is without foundation it should be promptly and emphatically denied, regardless of what effect such denial might have on the stock manipulators. We speak from the standpoint of the oil industry, taking it for granted that the executives of oil companies are primarily interested in the intrinsic values of the company rather than what the market reports show on stock quotations. Or at least the word can be passed out through the organization confidentially to those employes who are worthy of such confidence and consequently the most valuable, and whose loss of morale would be the most hurtful.

And in cases where the negotations actually are pending, so advising employes would be beneficial and more often than not would not endanger the negotiations to the extent that is often supposed. A good man values his job, but the best of them lose a large part of their efficiency and loyalty when there is vague uncertainty that that job is going to be suddenly taken away. The uncertainty is more disastrous than a known fact. If he is frankly told that the consolidation which may mean the abolition of his place is underway, he will often continue his work undisturbed up to the final minute, making such future arrangements as may be necessary regarding future employment contingent upon release from his duties where employed. Not so much the fear of losing the place as the uncertainty of it is what tears down the morale. A good man knows that he can get a job, but he wants to do it and have his reasons for doing it out in the open.

Standardized Equipment Ready For Fields

Committees expect Los Angeles meeting to mark progress but severest test comes on the leases

By Grady Triplett
Staff Representative

STANDARDIZATION of oil field equipment has reached the point of its severest test. Some of the products, manufactured under A. P. I. specifications, will go into the fields this year for actual use. It is there they must prove their value.

While the whole program of standardization is far from complete, the fact that sufficient has been accomplished to put equipment in the fields, bearing the Institute monogram, is evidence of the progress made since the movement took form.

The meeting of the Institute in Los Angeles will see further steps toward completing the work. This meeting may make it possible for other items to be given final approval. But there is no thought of completing the work this year. In fact those working hardest in the movement can not tell how long it will take to complete the work.

But the fact that manufacturers are now turning out equipment of A. P. I. specifications is evidence of progress in the past as well as an indication of progress for the future.

Three Items Ready

While the efforts involved in getting this equipment to the stage of usefulness has been great, those responsible for it, know the severest tests will come when the articles are put to work at drilling wells and bringing oil to the surface. So the program of standardization now becomes a problem for the leases, as well as for the office.

The equipment that will be available for field use this year is the cable tool joint, casing and rig irons. Some other items may be available. But these are now being manufactured. So they can be set to work beside similar materials of different specifications to determine whether or not the calculations of engineers and manufacturers have been correct.

The men having the work in charge believe they have completed proper specifications in designing these items. But they know it will take the field tests to prove their contentions.

And these men realize that the one problem now remaining for the standardization of the three bits of equipment being manufactured is a field problem. The men on the derrick floor must now prove the worth of this equipment, just as they must prove the value of the other equipment when it reaches the stage of field use.

As there has been misapprehension regarding standardization of oil field equipment, it may be well to acquaint the field man with the purpose behind the standardizatioin movement.

What It Does

One opinion that is held regarding standardization is that it will offer the field worker but one type of equipment for a certain use. This is an erroneous opinion, for in seeking to standardize equipment the purpose is not to change a product, except where it will come in contact with some other equipment.

Take a rotary swivel as an example. Nothing in standardizing it will change the inherent design of any swivel now on the market. Neither will it seek to hinder the designing of any new swivel.

But where the rotary swivel fits into the other mechanism or other parts of drilling equipment, standardization would have all identical.

That is true also of casing,. .The standard casing string will not mean that the field man will have just one make of pipe for his use. Under the A. P. I. monogram, the field worker will have just as many makes of pipe as he now has, or perhaps more than he now has.

But the purpose of standardization is to make it possible to use pipe of several different manufactured brands in one string of casing. Standardization will apply chiefly to threads and connections. Pipe may come from six different mills. But if each length and coupling bears the A. P. I. monogram it can be screwed together for use in one well.

Not to Retard

Another criticism frequently heard of standardization is that it will retard development. This comes from the opinion that the purpose of standardization is to determine on a piece of equipment and never to change that standard.

But the men responsible for standardization are not working to that purpose. C. A. Young, director of the division of standardization for the Institute, put it this way:

"If we have ten different pieces of equipment, each performing a similar function, it is logical that we have each standardized at the points where it meets other equipment.

"But that should not hinder progress. Rather it would seem to simplify it. For inventive genius will then have one point from which to move, rather than ten."

Neither is there any thought that new and better equipment will not come to the oil industry under the standardization movement. Progress is accepted as necessary. In fact the men responsible for this work look on standardization as progress.

It has been put this way: that in the standardization movement the oil industry is policing itself. For more than half a century, inventors and manufacturers have been giving the field work equipment for drilling wells and producing oil. Until standardization came along, little thought ever had been given to checking up on the relative merits of this equipment.

Check and Determine

Now in the standardization movement, the purpose is to check and to determine, first by calculations and later by field use, what of this equipment is best. Where it is possible to gain uniformity in similar equipment, the effort is to gain this. Where it seems wise to change design to gain longer life for equipment that has been recommended by design and will be tried in actual use.

The cable tool joint has been adopted by the board of directors of the Institute. The master gauges are now being made. Sets of these will be placed in several centers over the United States, so manufacturers can take their gauges to the master gauges for checking as frequently as they deem necessary.

Several manufacturers already have been given permission to turn out a cable tool joint bearing the A. P. I. mongoram and the products turned out from these gauges will go into the fields this year for field use.

The gauge table also has been prepared and will set up permanently the standard for manufacture under these specifications.

Casing Ready

Casing has been adopted by the Institute's directors and this will be ready for field use this year. Pipe was the first product taken up for standardization and other items under this list are moving toward approval by the directors.

There are manufacturers authorized to use the monogram on casing, while this list doubtless will grow during the year.

This committee, whose chairman is J. Edgar Pew, president of the Insti-

tute, has further work to do on tubing and drill pipe. Unless there is unforeseen delay, the committee will finish its work on these two items at the Los Angeles meeting and give the specifications to the directors for approval.

This committee is dependent on work of the committee on rotary drilling equipment for reports on rotary drill pipe. Tables of sizes, threads and gauges drill pipe are to be submitted by the Rotary Committee.

Tables covering identical items on tubing will come to the pipe committee from the committee on pumping equipment.

The general subjects to come before the pipe committee will deal with the identification of phosphorus content in open hearth welded pipe.

Making Rig Irons

There will be a general report on physical tests on a series of low carbon steel, containing varying amounts of phosphorus.

With six firms now manufacturing rig irons of A. P. I. standard, the work left for this committee may be brief, as its work has been adopted by directors of the Institute. It will meet, however, to consider any business that may concern it directly, or to consider matters that may come from some other committee.

The committee on the standardization of rotary drilling equipment, of which Captain J. F. Lucey is chairman, will submit report No. 7 to directors of the Institute for consideration. This report involves the dimensional standards for transmission. It already has been approved by the general committee on standardization, but is docketed for January 19 at Los Angeles in order that later developments may be considered since its publication.

Reports 7-A of this committee, involving dimensional standards for rotary drilling equipment is in the same status as report No. 7.

Indications are that final recommendations will be made on that part of this committee's work concerning drill pipe.

Test in Oklahoma

There has been some conflict concerning the rotary tool joint. But the report from headquarters of the standardization division of the Institute is that the Oklahoma subcommittee now has agreed to give a field test on the tentative A. P. I. joint with Acme type thread.

Fish tail bits, drill collars, grief stems and swivel connections will be considered at Los Angeles.

A special committee will be named to handle all quesitons of gauges that may be necessary to the work of this committee.

Other subjects to be considered involve slush pumps, hose nozzles and clamps.

The work of the committee on standard rigs and derricks, W. W. Fondren, chairman, is near completion. Chairman Fondren has issued a program to be followed at Los Angeles, when his committee meets Monday previous to the opening of the Institute sessions. This program will take up questions of bases, heights, water table opening and many other specifications for the derrick.

Derricks in Field

Derricks, built on specifications tentatively adopted, have been built in the Gulf Coast fields by Mr. Fondren, so reports will be on hand from actual use of these derricks.

A paragraph from the program furnished by Chairman Fondren gives the progress of the committee as follows:

"It is hoped that this committee will be able at the next meeting to conclude its recommendations on derricks and standard rigs in so far as they govern dimensions, although it is not probable that this committee will be able to decide on strength and design requirements or specifications."

Along with other work, the committee on wire rope and manila cordage is

Historically Speaking

Two names are indelibly stamped on the movement for standardizing oil field equipment—J. Edgar Pew and Captain J. F. Lucey.

Each was active in the work before it became a part of the work of the American Petroleum Institute and each has continued his efforts as the work has progressed.

Even before the formation of the American Petroleum Institute, Captain Lucey was convinced of the value of standardization. These efforts resulted in a conference at the first institute meeting at Washington. H. J. Lockhart of the Parkersburg Rig & Reel Company and C. A. Young, then with the Lucey Manufacturing Corporation, met and discussed standardization informally.

The one result of this conference was a decision that standardization could be accomplished.

Following this, standardization moved forward by individual efforts, through organizations. Casing was undertaken by the Mid-Continent Oil & Gas Association, with Mr. Pew as chairman. Cable tools, rig irons and rotary tool joints were taken up separately by men and manufacturers at the request of the Institute.

Thus the movement grew until it became perhaps the major effort of the American Petroleum Institute, following the passage of a resolution at the meeting of that body in St. Louis, December 8, 1922.

C. A. Young later was appointed director of the Division of Standardization, now having headquarters at Dallas. The resolution follows:

At the concluding standardization session on December 8 the following resolution proposed by the joint committee on resolutions consisting of representatives of the Board of Directors of the American Petroleum Institute and members representing the group session on standardization was unanimously adopted:

RESOLVED, By the group session on standardization that it is their judgment that standardization, simplification and improvement of oil industry equipment and methods is necessary and desirable and will result in great economies; be it further

RESOLVED, That the Board of Directors of the American Petroleum Institute be requested to declare it to be the policy of the Institute to encourage and to bring about standardization and simplification of oil industry equipment and methods where desirable and practicable and to the end that the Board of Directors of the Institute be requested to appoint such committees of the oil industry as may be advisable to carry on the work in co-operation with the executive staff of the Institute and with the various agencies already contributing valuable work on the subject, such as American Society of Testing Materials, Simplification Bureau, Department of Commerce, Bureau of Mines, Bureau of Standards; and be it further

RESOLVED, That whereas committees of various associations and organizations are already doing commendable work on particular subjects relating to standardization:

1. Casing—J. Edgar Pew, chairman of the Committee on Casing and Rotary Drill Pipe of the Mid-Continent Oil and Gas Association;

2 Cable Tools—Grant Hubley, chairman of the Committee Conference held under the auspices of the American Petroleum Institute;

3. Rig Irons—H. J. Lockhart, chairman of Vo'untary Committee on Manufacturers called together under the auspices of the American Petroleum Institute and co-operating with the Tulsa Purchasing Agents' Association;

4. Rotary Tool Joints—S. A. Guiberson, Jr., who has been co-operating with the various agencies to bring about standardization of tool joints;

the chairmen of the above committees be requested to continue their work and to obtain general agreement if possible on the best practical standards and to submit the results of their work to the directors of the Institute for action. Be it further

RESOLVED, That it is the recommendation of the group meeting that such standards and specifications as shall be finally approved by the Board of Directors of the American Petroleum Institute should be known as A. P. I. standards and specifications.

preparing a code for the proper use and care of these articles in the field.

This committee has done extensive research during the year. Its final recommendations are dependent largely on work with other committees. Larger pulleys, forms of grooves and other parts of the rig where wire rope and cordage are used. Larger openings at the top of the derrick for the crown block are likely to result from the combined recommendations of these committees.

Work on Boilers

Indications are that the committee on boilers, A. B. Steen, chairman, will adopt the A. S. M. E. code. But there are some points of difference which should be met and finished at Los Angeles, where it is hoped final recommendations can be made and left for the approval of Institute directors.

This committee is bent on getting uniformity of essential fittings on boilers, so those of different make can be assembled for placing in a field power station.

The committee on belting has adopted six specifications on belts. It is setting up limits on all sorts of belts.

The work of this committee should be finished at Los Angeles up to the fatigue test.

This is another of the committees preparing a code for use and care of belts in the field.

The committee on pumping equipment should complete its work on tubing and sucker rods at Los Angeles. It will review other items in pumping equipment.

The committee on steel storage and production tanks was the last to be named. At Los Angeles it will make an analysis of reports from the district committees.

Specifications will be drawn up at Los Angeles.

Industry May Have Reached Point Near Stabilization

By Kent Ridley,
Staff Representative

ASIDE from the money profits revealing prosperity in the industry, the record as regards marketing conditions during 1925 differs little from that of previous years.

There were the usual peaks and valleys, except that the peaks were not so high nor the valleys so low—rather nearer a straight line than the years immediately previous. Always, though, the producer, the refiner, and the marketer has compared his unit prices with those of after the war days when crude went to $3.50 in the Mid-Continent.

But the balance sheets of the companies, their dividends and quotations on the stock market all indicate that a medium settled price is better for the industry.

And more than that it has been proven that oil producers can prosper with oil selling under $2.50 in the Mid-Continent, and far under that in other places where the cost of recovery is as high or higher.

To speak of an average under present methods of posting prices is indeed a difficult task, but it can be approximated that the price average in the Mid-Continent section was around $2.00 per barrel or slightly under. This, in the light of what the year has revealed on the balance sheets, is a fair profit returning price for crude oil, and one at which the small wells can be produced. Then, too, much of the excess of oil produced in 1925 over 1924 was of lower gravity and carried a smaller price.

Nor were the profits shown on the balance sheets made in the refining and marketing branches of the big companies, if the prices obtained for refined products are to be compared with other and leaner years when often the ruling price for finished oils averaged higher. The only advantage in these departments was added volume in getting to the consumer the increase of 50,000,000 barrels of crude oil.

Apparently the industry has profited from increased efficiency in all branches. Comparatively the product has been sold for less money, but more of that money was net to the producer, the refiner or the marketer as the case might be.

The producing branch of the industry has done a normal amount of exploring. Which means that a normal amount of money has been invested in wildcat acreage, and a normal amount has been spent on wildcat drilling. However there has been an absence of million dollar purchases of quarter sections.

Another profit returning circumstance, perhaps, was in that there was less of frenzied drilling in flush areas where all thought of economy was lost in the race for the sands, with the attendant waste not only of labor and material but in the drilling of useless wells in territory that more sane development would have shown unproductive. The greater cost of drilling to greater depths in the fields which have induced intensive development has, of course, helped to bring about this condition.

Probably 1925 will stand out as the year in which oil production changed from a "game" to an industry.

Aside from the economies of production pointed out above, greater efficiency in tools and better handling of them has had a part. As wells go deeper better machinery is required and more skill is necessary. Greater depth also calls for more investment to complete a test, which has relegated the fly-by-night operator to the discard. This trend may place the development of future oil production in the hands of larger units entirely and tends toward monopolies, but nevertheless it will mean the minimum cost in recovering the oil.

Efficiency has been increased in all phases of production from the location of the test to the handling and moving of the oil. Geology has continued its advances. Drillers have worked with the geologists and used the information given them, and have taken all the advantages offered in improvements of tools and methods by the engineer. Premiums for high-gravity oil have led to better conservation of the oil above ground in field storage tanks and more care in movement through pipe lines.

In the refinery constant improvement has been made in methods to extract the maximum of the most wanted product—gasoline—from the crude oil, with the greatest economy in handling. Extending to the marketing end, an increase of gallonage has been handled without an increase in equipment in ratio to that volume.

A notable number of substantial consolidations and absorptions took place during the year and still others are rumored. This strengthening of units not only have bettered the position of the companies involved but in instances have aided competition favorable to the interests of the smaller independent producers.

For the immediate future it appears that the producing industry in the United States will have substantial competition from foreign fields—notably South America and possibly an increase in Mexico. Competition which will hold prices to reasonable levels should induce a continuance of large consumption under present favorable general business conditions and stronger economic conditions in Europe, so that prosperity for the present year for the oil industry is contingent only upon economy within the industry.

More Wells, More Oil and More Consumption

Smackover and Wortham made up U. S. surplus

By Grady Triplett
Staff Representative

ONE lesson to be learned from production totals of 1925 is the suddenness with which conditions in the industry change.

The year dawned with indications of a reduced output for Mexico. This was recorded at the end of the year, for the Southern Republic gave the world 31,000,000 barrels less oil than it did in 1924.

But, whereas this was calculated to release a pressure held against the Mid-Continent, it permitted the application of pressure from another source, California crude oil and gasoline moved by water through the Panama Canal met products of both Mid-Continent and Middle West sources, on the Atlantic seaboard and won a decision.

While the figures for 1925 are not the only avenue to the conclusion, they are outstanding in that they show how suddenly the balance of power shifts in the business of producing oil.

Without Smackover, production for the United States would have been but 20,000,000 barrels above 1924. But Arkansas, due to deep drilling at Smackover, poured 78,000,000 barrels oil into pipe lines and tanks, giving the United States more than 50,000,000 barrels increase for the year.

The point of this is that deep production from Smackover was not even a threat when 1925 claimed the front page of the calendar.

Smackover and Wortham

Something of the reverse is true of Wortham. That field offered its thrust the latter part of November and was tagged as being good for at least 250,000 barrels peak production early in the year. But Wortham never reached such a peak, although its total production of 16,000,000 contributed materially to the production gain registered for Texas in 1925, for Texas registered an increase but slightly in excess of 17,000,000 barrels for the year.

Further delving into the sources of the higher output for the United States, reveals the fact that these two fields, Smackover and Wortham, were responsible for the result that brought the total for this country to a point 50,000,000 barrels in excess of 1924.

Pennsylvania, California, Colorado, Kansas, Texas, Arkansas, New Mexico and Louisiana each produced more oil in 1925 than in 1924. Declines were recorded in Ohio, West Virginia, Kentucky, Indiana, Illinois, Oklahoma and Wyoming.

To recall these advances and declines when they are history brings no advantage. What is more significant is the fact that the transportation facilities of the nation are now so developed that one section can take advantage of a condition that formerly was calculated to bring the prosperity to another section.

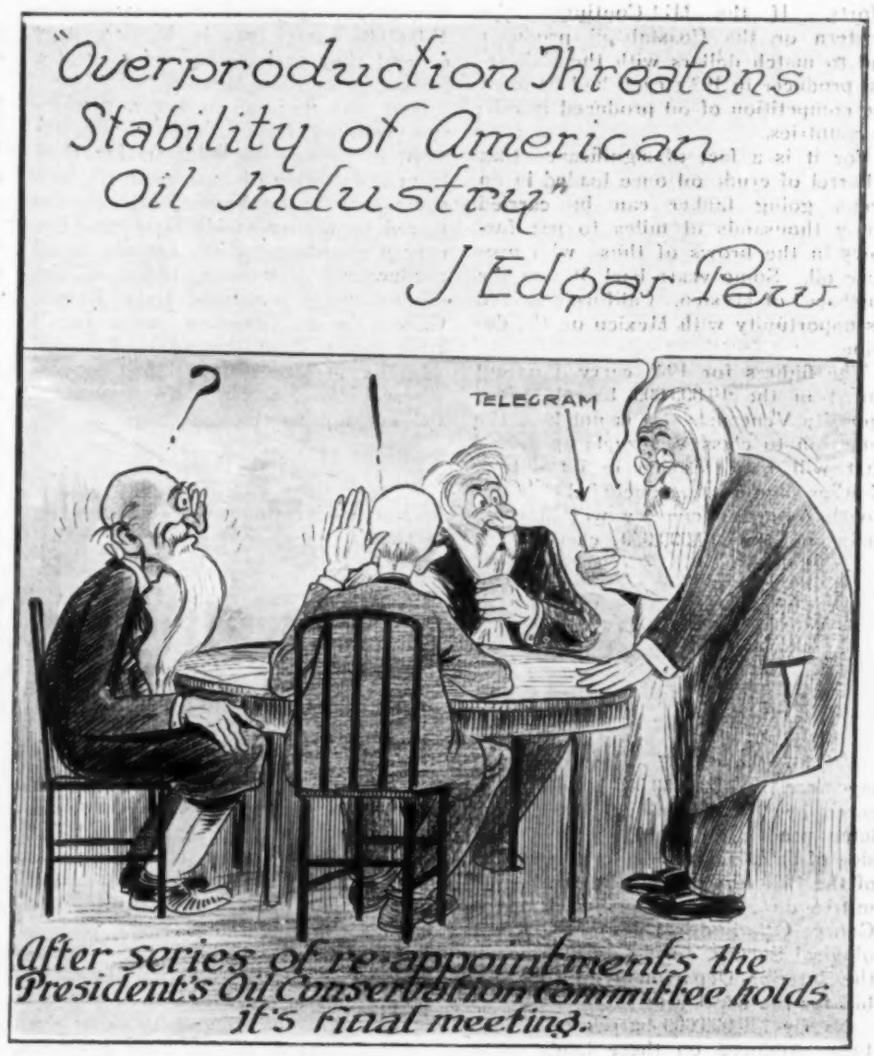
The year is a striking example of the fact that the oil producing territories of the United States may safely be taken as a unit, when it comes to distribution.

Western Oil in East

The best proof of this is what happened in transporting California crude oil and gasoline to the Atlantic seaboard. Although the Panama Canal and the ocean tanker are old assets, they were never properly appreciated until 1925. Some oil had moved from the Pacific to the Atlantic ocean prior to 1925 but these movements were looked on as of no lasting consequence.

But the turn of affairs in 1925 was sufficient to establish the fact that California oil wells are to be considered in calculating the gasoline supply of New England. The year wrote in no uncertain terms that the oil producer of Pennsylvania, Oklahoma, Texas, or any other state must look on the California well owner as a competitor.

It was natural for producers and refiners in other states to raise a wail over the fact that they were up against


"Overproduction Threatens Stability of American Oil Industry"
J Edgar Pew.
?
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TELEGRAM
After series of re-appointments the President's Oil Conservation Committee holds it's final meeting.

something never before encountered. What the Mid-Continent and the Eastern producer seem not to have appreciated is that the day may come when their products will move to the Pacific coast to compete with California oils.

The year also witnessed the first period of substantial delivery of oil from the Mountain States to refining centers of the Mississippi basin. The Sinclair line moved but little oil, compared with its capacity, but there was little to move. The delivery is evidence of what may be done when conditions demand.

Mountain States

This brings to light conditions in the Mountain States, where figures for the year show a falling output. It is possible and even probable that the pipe lines built to transport crude oil from that area to the Mid-Continent may in time be used to transport crude oil from the Mid-Continent to the Mountain States.

Such transportation will result when production and consumption are so changed that it will be necessary.

The figures for 1925 reveal the oil producer of the United States as being up against the whole world in his sales efforts. If the Mid-Continent, the Eastern or the Coastal oil producer had to match dollars with the California producer in 1925, each had to meet the competition of oil produced in other countries.

For it is a fact of significance that a barrel of crude oil once loaded in an ocean going tanker can be carried many thousands of miles to put furrows in the brows of those who produce oil. Some years back it was the "menace" of Mexico. California gained its opportunity with Mexico on the decline.

The figures for 1925 carry a potent threat in the 19 000,000 barrels listed opposite Venezuela. It is not here the intention to class Venezuela as a land that will rival Mexico in its output. Neither should it be concluded that this South American country will long remain in the 19,000,000 class. The amount of oil Venezuela will offer the world is yet to be determined.

Venezuela Potential

What is more pertinent is the fact that oil from this country will claim a place in the final summing up of prices for oil elsewhere in the world. A glance at the map is evidence that this country is closer to New York harbor than Los Angeles. And recently some stickler for distances ventured the statement that Venezuela is closer to New York than Tampico is.

Distance is only one item in the cost of delivering a tanker of oil. But Venezuela is to be considered in calculations for the world's oil output in 1926. If the oil is there, and 19,000,000 barrels speak in favor of that, it will find its way to the automobile centers of the world. When it does that, it comes in competition with oil produced in any country of the globe.

The year just closed was one of higher production. Mexico alone excepted, the oil producing countries of the world gave up more crude oil in 1925 than they did in 1924. The increase was 50 000 000, or equal to the increase in the United States. As the foreign countries had to overcome the 31 000,000 barrel loss in Mexico, it is evident they each came in for greater output, other than Mexico.

And this increase in world production resulted from a steady development of proven oil fields, rather than from the drilling of flush deposits. To some extent, the higher total can be traced to higher yields from the European countries, which are old in oil production. Roumania, oldest of the oil producing countries, Italy, Russia, Galicia, Japan, Germany, India, Dutch East Indies, Peru, Argentina, Trinidad and Egypt are among the nations, whose 1925 oil output showed substantial but not spectacular gains in 1925.

Greater Demand

A conclusion that comes from but brief consideration of these increases is that the higher output came in response to an increased demand. If the world has produced more oil in 1925, it has consumed more than in former years. Both the higher output and the higher consumption have come through an orderly expansion of business.

The record for 1925 further sets down the axiom, "more wells, more oil." The figures are available on drilling for the United States only. And these show that more wells were drilled in 1925 than were drilled in 1924.

Only California and the Mountain States saw less drilling in 1925 than they did in 1924. And California is an exception to the axiom above, for its output for the year went up despite fewer wells drilled. This bears out the contention of those prone to nag at California that the state has potential production which can be drawn on as needed. By some means California managed to come to the end of 1925 with more than a million barrel increase in output, although it had drilled but 1134 wells in that year, against 1640 in 1924.

In the case of the Mountain States, less drilling brought less oil, for the decline has been steady in that area.

Kansas shows the greatest increase in wells completed. Its total of 1537 in 1925 sets opposite 722 in 1924.

Texas topped the list for states in the number of wells drilled, having 6545. The whole series, classed as Eastern States, had 8516. The low state was Louisiana, whose 555 surpassed the 1924 total of 494.

Oklahoma drilled more wells in 1925 than in 1924 but it produced less oil by the same comparison.

Wells Drilled

The record of wells drilled for 1925 puts at rest some of the talk of slackening field activity. The oil fields of the United States saw 25,405 wells drilled in 1925, the highest figure ever set. The program of drilling must have called for the greatest outlay of drilling equipment ever bought in the United States.

Government Royalties in Five Years More Than $33,000,000

Washington, D. C.—Royalties totaling more than $33,000,000 have been secured by the government from petroleum production on public lands outside of naval reserves since the passage of the 1920 leasing act, the house committee on appropriations was told by George Otis Smith, Director of the Geological Survey, during its hearings on the Interior Department appropriation bill for the fiscal year 1927.

Nearly 120,000,000 barrels of oil have been produced on these lands in the five years since the enactment of the law, the committee was told, and during 1925 the work of the survey in this connection increased more than 20 per cent.

One of the great difficulties in connection with this work, it was declared, has been the maintenance of a qualified force of men at the salaries it is possible to pay under the practice of the federal government. Men competent to save their salaries many times over by introduction of economic practices, Mr. Smith pointed out, are in demand, and their services are financially appreciated to a much higher degree by private corporations than by any government agency.

The bill as brought into the house by the committee provides $312,000 for this work during the coming fiscal year, a decrease of $37,550 from the funds appropriated for the current year. The amount allotted, however, is that which was estimated as necessary by the budget bureau.

Graphs Show Production and Prices In Remarkable Uniformity

Absence of peaks and valleys notable during 1925; price was highest when production most

By A. R. McTee
Staff Representative

CONTINUOUS conformity is the important fact revealed in graphic representation of crude production and price structures for 1925. Compared with 1924, curves for both output and price in the United States, are characterized by absence of valleys and peaks. Both curves show a stronger tendency to flatten out than for a number of years past.

Whatever the relation between output and price, 1925 stands as a fine example of what can happen when stability exists in both. All major companies report excellent profits from 1925 operations, and securities are showing a stronger position than they have for many months. The only conclusion that can be drawn from such facts and conditions is that the year was a profitable one.

A study of charts picturing all branches of the industry brings out very little divergence in trends. Production and consumption for the entire world showed a tremendous increase. This took place gradually, the rise being continuous throughout the year. Local small slumps in the United States, and the big drop in Mexican output, were much more than offset by increases in other fields, approximating 100,000,000 barrels. Venezuela played a big part in this increase and that country with the United States is largely responsible for keeping the world production curve steady throughout the twelve months. Rehabilitated fields in Europe aided in furnishing a volume of crude that helped balance the situation from the beginning to the end of the year.

The steady decine in Mexico caused the United States import curve to dip sharply; however the importance of this drop is lessened by the flood of Smackover heavy oil, much of which went to surces that had previously been bidders for oil from Mexico.

U. S. Furnishes 71.8 Per Cent

Inasmuch as the United States furnished 71.8 per cent of the total oil recovered in 1925, a brief review of each section of this country will be enlightening. With the exception of Rocky Mountains and California, every district showed an increase. The biggest bulge in the curve was caused by Arkansas, which alone increased a little better than 28 000 000 barrels over last year. This came from Smackover, and with the added output from Garber, in Oklahoma, caused the Mid-Continent curve to show the sharpest rise.

As luck would have it the Smackover and Garber increases came at a time when weakness was showing in other fields in the United States, so that their effect was sufficiently minimized to cause a lift in the Mid-Continent curve, rather than a prominent peak. These increases were also negligible in their influence on price because of the time at which they occurred. When Garber was boosting light oil figures, Mountain States were barely holding their own; and a demand for fuel oil kept Smackover from smashing the market.

History repeated itself in the Gulf Coast territory and the year started off with a low output which gradually went up as the South Liberty field was developed, reaching its highest yield in May. Due to deep sand drilling, however, and to inside wells in old fields in both Texas and Louisiana, figures held up until the curve for this section approached a straight line toward the close of the year.

Undoubtedly much of the increase in yield from the whole world can be attributed to improved engineering in bringing oil to the top of the ground. But at the same time it is significant that several thousand more wells were drilled in 1925 than in 1924. More regularity is evident in the completion curve than in 1924, and it follows more logically the seasonal cycle which inevitably goes with development in settled fields.

Biggest Year in Mid-Continent

Oklahoma-Kansas taken together, North Texas, and North Louisiana and Arkansas showed the biggest production in their history, while Gulf Coast and the Appalachian region increase was only over last year, each of these districts having reached its peak a number of years ago. Whether the three fields showing their highest output reached a peak or not, cannot be said. Although there is nothing in sight in any of this territory now to indicate that 1926 will show more oil than 1925, one big field would change the outlook entirely. And a big field is always a possibility in spite of geology, et cetera.

Just as there was a certain stability in production during the year, the fact paralled itself in prices. The outstanding significance of the price curve is its lack of tendency to change. Prices showed their usual response to seasonal demand and advanced and fell accordingly, but there was a positive element of firmness which remained through the whole year. This was evidenced by premium paying when the demand was supposed to be slackest in the Mid-Continent field.

A glance at the chart for 1924 will show that postings refused to stay put and the whole year was characterized by shakiness in the market. Postings were advanced immediately after the first of the year, but they started down almost as quickly. Then there was a regular stair-step progression downward with the lowest prices prevailing at the close of the year.

A decidedly different situation marked 1925. In the Mid-Continent, which controls the price of light oil, postings were advanced in January, then again in February, and remained at the same figure until early in September. There were a few changes in the meantime but in each instance a rearrangement of the gravity schedule was made so that the top price was not disturbed. In September, the Mid-Continent posting dropped, but did not go to its January mark.

In the Gulf Coast an increase was posted in January. This was advanced slightly in February, but in April the price slumped and then again in August, so that the year ended with the same posting as it had at the start.

Eastern States reached the maximum price in August and then dropped back to the January price, but this was advanced before the close of the year.

It is significant that only the Gulf Coast ended the year with the same prices as existed at the beginning. Lack of an increase in the coast country may be accounted for by the fact that three fields were discovered in salt dome territory near the close of the year, potentialities of which are not yet known.

California showed the least variation in price of any other state, but ended

the year with a higher posting than it had at the beginning. From February on, the price was better than that paid in 1924.

The improvement in the general situation over 1924 is perhaps noted by the fact that when production was highest, prices were lowest. Figures show the high point of output in 1924 to have been reached in September, and at that time crude postings were at their minimum in every section. In 1925 the peak of output was reached in June, but crude was bringing its highest price a month and a half later, and this strength persisted, somewhat from then on.

Summing up the data provided by the production and price curves, it is clearly shown that the less fluctuation in both the better the chances for profitable development. Of course this can only be true after consumption has reached a certain point—a point that tends to approach the output. Whether fluctuation in output of crude oil is a controllable factor or not is a doubtful question to say the least. Some of the country's most practical oil men do not think so. However, 1925 to the petroleum industry is an example of what results when output and price assume the proper relation and maintain it.

Demand Keeps Pace With Production

AFTER all deductions concerning the industry in 1925 have been made, one big fact remains as the factor that really made the year a success. Consumption of crude oil increased throughout the twelve months and showed a bigger aggregate than in 1924, by several million barrels. The total increase of 50,000,000 barrels in world production means little more than an increase of half that amount in 1924, for instance, because of the relative increase in the volume of consumption.

Throughout the year the consumption curve followed each move in production until the two are practically alike. The margin between them is more regular than during any year since 1920.

A comparison of crude prices domestic consumption and production over a period of five years shows that prices have been best when consumption was running close to production. For example, the highest prices the industry has ever known were pand in 1920. At that time consumption was equaling, and a part of the time exceeding the output.

Comparing production and consumption for several years back, a cycle is seen which has held good continuously. At the beginning of the year production and consumption tend to meet. Shortly after the first of the year the curves begin to diverge, reaching their widest difference about the middle of the year, and then gradually grow toward each other as the year closes. Through 1918, 1919 and the middle of 1920, production and consumption pursued practically the same line, and there was very little stock accumulation in either crude or refined products. Imports were consistently increasing.

From the middle of 1920 to July, 1924, production was augmented by heavy stock accumulations, and the tendency of the consumption curve was, generally speaking, to diverge from production. The two crossed several times, however, there benig a slight draft on stocks in August, 1921, August, 1922, and a heavier one throughout the last quarter of 1924. There was less stock accumulation in 1925 than at any time since 1920. Imports declined throughout the year, but consumption kept going up. Thus we reach the first really sound situation since 1920, with resulting prosperity. Stocks were being drawn on from August on and the situation was sufficiently sensitive that any appreciable change in demand for gasoline caused immediate fluctuations in the refined market.

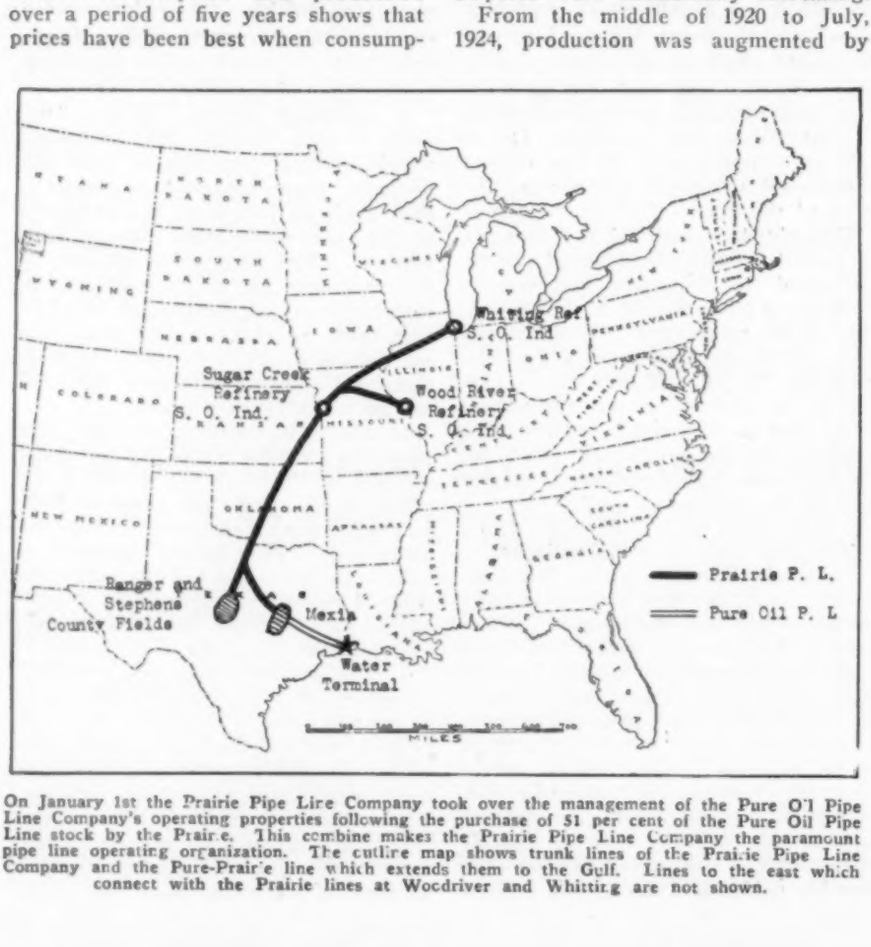
Production is showing increases now and it may be that the two curves have approached closer to each other than they will again during the year. However the busy season for refineries is close at hand and unless the output of oil increases materially, stocks will probably be drawn on further.

Gasoline stocks increased rapidly at the beginning of the year and reached their peak during March. There was a gradual easing off during April, May, and June, followed by a more pronounced decline during the last six months of the year. The principal difference between 1924 and 1925 was an earlier peak in 1925 and a more gradual decline over the rest of the year. The seasonable rise was similar for the two years and the relative storage on hand at the close of the two years differed little.

There was a heavier draft on gasoline storage during the early part of 1924 than in 1925, but this was offset by less stock accumulation in 1925.

The gasoline consumption curve for 1925 is a good deal more regular than for 1924. The peak of consumption was reached at about the same time in both years, but the total amount of gasoline used in 1925 was considerably more than in 1924.

Consumption of all refined products shows strength during 1925. With each article there was a seasonal response in the demand, but as compared with 1924, the aggregate demand was greater.



On January 1st the Prairie Pipe Line Company took over the management of the Pure Oil Pipe Line Company's operating properties following the purchase of 51 per cent of the Pure Oil Pipe Line stock by the Prairie. This combine makes the Prairie Pipe Line Company the paramount pipe line operating organization. The cutline map shows trunk lines of the Prairie Pipe Line Company and the Pure-Prairie line which extends them to the Gulf. Lines to the east which connect with the Prairie lines at Woodriver and Whiting are not shown.

Louisiana-Arkansas Operators Have Best Year in History

Smackover established as world's largest oil pool; old Caddo field promises biggest developments

By Special Staff Representative

Shreveport, La.—Louisiana and Arkansas oil operators have just completed the greatest year of their history,—a year which not only brought the discovery and development of the most prolific oil reservoir in the history of the world at Smackover, but which also marked the very first discovery of oil in the Eocene and Lower Cretaceous beds of this territory. The veterans of Caddo, Bull Bayou, and Smackover are not looking backward to dwell upon the glories of these magnificent successes, however. Instead, they are looking forward, confidently expectant that the new year will afford opportunities for even greater achievements. The year 1925 has been described as a period of exploratory effort, during which the battleground was defined and mapped out prior to the launching of a tremendous and aggressive campaign of deep drilling which may follow during 1926.

Drilling and geological reconnaissance done during 1925 has revealed oil and gas reserves of greater or less importance at Pine Island, Cotton Valley, Smackover, Stephens, Urania, and Bradley, where development campaigns may be expected to follow or to be continued during 1926. Elsewhere, and particularly where structural conditions are known to be favorable, prospecting at deeper and deeper levels will be continued and renewed with vigor, since the discovery of oil in commercial quantity in a deep sand at Pine Island and in a lesser quantity at greater depth at Cotton Valley.

In an article from this same pen, published in our statistical issue of one year ago,—prior to the important deep sand discoveries at Smackover, Pine Island, and Cotton Valley,—is found the prophecy that, "Most important of all, possibly, as potential sources for new production, are the deeper sands which have not yet been tested in many of the producing oil fields of Louisiana and Arkansas. * * *—Pine Island, Haynesville, Cotton Valley, Bellevue, Shongaloo, Sarepta, Spring Hill, and Smackover." And, in view of the recent discovery of oil in the Nacatoch sand at 1540 feet at a location two miles east of the Blossom-sand production at Stephens it is also of interest to recall the following sentence which apreared in the same article: "Especially alluring is the area lying between the Smackover and Stephens fields, where the first showing of oil in the state was obtained."

Deep Development

Although great things were accomplished during 1925, it still may be said that the deep sands have not been adequately tested; and, with equal emphasis, that our most fertile sources of new production may be found in the beds of the Lower Cretaceous series, as yet barely touched by the drill. We enter the new year with every prospect for firm market conditions and an eager demand for crude oil; and there is no "distress" oil to cheapen the rewards of the successful prospectors.

To emphasize the thorough and persistent character of deep drilling operations now in progress and in prospect in Louisiana and Arkansas, the attention of the reader is directed to the Williams deep test, in section 31-13-11 of the Naborton District, in De Soto Parish, where the Gulf Refining Company is drilling at a depth of more than one and one tenth miles below the surface. The Dixie Oil Company, the Ohio, Fortuna, and Humble companies, and the Palmer Corporation assisted by the Louisiana and other aggressive producing organizations are "carrying on" with equally commendable vigor at other strategic structural locations in the Shreveport-El Dorado territory.

It even appears as within the realm of possibility that the year 1926 may bring forth competitive drilling campaigns at Pine Island, Urania, Smackover, Stephens, or Bradley, with the added possibility that Cotton Valley may enjoy a revival of activity if the present showing of oil in the deep gas well drilled by community effort should be followed by more favorable developments in other deep wells now being drilled by the Ohio, Humble, and Fortuna companies.

Oldest Field Has Brightest Prospects

The Caddo District, the oldest and formerly the most productive oil field in the Louisiana-Arkansas territory, yielded its laurels to Smackover during the year just ended. Caddo has produced 107 million barrels of oil during the twenty years since development began; but the great Smackover Field has accounted for more than 165 million barrels of oil in only two and one-half years.

Approximately one third of Caddo's grand total of production has been obtained from the Gulf Refining Company's prolific Ferry Lake Property, near Mooringsport. This lease, which embraces the bed of Caddo Lake, has produced more than 35 million barrels of oil, according to reports current in Shreveport. Well No. 215, in section 15-20-16, has yielded more than one and one quarter million barrels of light oil since its completion in April, 1924; and it is still flowing between 900 and 1000 barrels daily. Old-timers around Shreveport, Oil City, and Mooringsport refer to the Ferry Lake property as the cornerstone of the Gulf Refining Company. The developemnt of this large and compact property has not been hastened by offset completion; and considerable drilling remains to be done in the lake bed and in the vicinity of the remarkable gusher referred to above. Development is being continued in a leisurely manner, two drilling rigs being kept constantly busy on the lease.

Although Caddo is the oldest producing area in this territory, its prospects for future greatness are by far the brightest, if one may accept the opinion of the aforesaid old-timers around Shreveport. New fields of unknown extent and uncertain fertility have recently been found in other sections of Louisiana and Arkansas; but a number of the producing fields of these states must soon fade into inactivity, unless deeper productive sands are found. Not so at Caddo. In the Pine Island District of that parish, deep sand production is an accomplished fact; and the initial stages of a new drilling campaign are upon us. The Dixie Oil Company's Robertshaw No. 53, in section 13-21-15, discovery oil well of the Lower Cretaceous series and one of the three wells which have contributed most to the present feverish interest in deep sand operations, has been averaging in excess of 500 barrels of net oil per day since its completion at a total depth of 3747 feet on December 4, last. The well is making around 4000 barrels of fluid, of which about 3500 barrels is salt water. Operators are at a loss to determine whether the water is coming from the pay-sand, or through a leak in the casing.

Valuable Gas Well

This important completion was preceded by about one year by the discovery of a richly-laden gas at a depth of 3623 feet in the same company's well No. 43, located on the same lease, which really afforded the first tangible success in the extensive deep drilling operations which have been in progress throughout the last two years. The two locations are only about a quarter of a mile apart; and, in the opinion of experienced practical well men, the only reason that the earlier effort did not achieve the discovery of the coveted oil reservoir is that the tremendous gas pressure of 1500 pounds blew the tools out of the hole before the bit had penetrated to the oil-bearing formation underlying the gas. In No. 53, the discovery oil well, rotary drilling equipment was used; and, with the aid of oxide of

iron and heavy mud, the high pressure gas was penetrated, controlled, and to a certain extent cased off, which permitted deeper drilling into the sand in which the oil was found.

The discovery well has produced from 1500 to 4000 gallons of natural gasoline per day, fluctuating with weather conditions, for more than a year. Yields of this character were secured by the installation of a very simple contrivance of snubber tanks which utilized only the expansion of the well's natural pressure to condense the gas into liquid. Because of this remarkable yield of clear water white gasoline, No. 43 is known far and wide as "the Pine Island gasoline well."

Lately, however, the Dixie Oil Company has started operations in a nearby gasoline plant, construction of which is still incomplete. Although less than 10 million cubic feet per day of the well's enormous potential production is being run through the plant, a yield of from 4500 to 5000 gallons per day is being secured, it is said.

Operating Costs Stabilize Development

It seems probable that the development campaign at Pine Island may assume important proportions during the current year; but it is not expected that the feverish scenes which characterized the Homer, Bull Bayou, El Dorado, and Smackover booms will be re-enacted there. In the first place, the small promoters who contributed to the haste, waste, and confusion of the Smackover boom will practically be debarred from participation in the revival of activity at Pine Island by reason of the high value of acreage, the great depth of the production, and the consequent high cost of drilling. In the second place, most of the desirable acreage is already in the hands of large producing companies, many of whom have held it since the discovery of the field in 1917. The Dixie Oil Company, the pioneer of the field, to whom credit for the deep sand discoveries is due, owns extensive leases on the most favorable parts of the structure.

Indeed, drilling to the 3700-foot level at Pine Island is likely to be so expensive that even the major companies themselves will be restricted to very cautious movements. Drilling is now in progress in two deep tests owned by the Dixie Oil Company and in two more owned by the Ohio Oil Company. The Dixie company is drilling at 3725 feet in its Jolley No. 1, in section 27-22-15, about four miles northwest of the discovery wells; and at 2890 feet in its Noel B-2, located in the same section as the Robertshaw wells. The Ohio Oil Company is fishing for drill stem at 3684 feet in its Ardis No. 1, in section 1, and coring at 3315 feet in its E. K. Smith No. 18, in section 12, both in township 21-15 and in the general vicinity of the deep sand wells.

The Fortuna Oil Company is setting a string of 4½-inch casing in order to make a test of a promising showing of gas logged at a depth of 4023 feet in its Levee Board No. 2, an important deep test located in section 8-20-15, near Oil City. It will be remembered that this well blew in several months ago as a large gasser from a depth of 2946 feet, demolishing the derrick and bursting the casing.

Further developments may follow the recent discovery by D. C. Richardson of a very satisfactory gas production at a depth of 2258 feet in his Youree-Randolph No. 1, which is located in section 13-20-15. This location is in semi-wildcat territory, west of Belcher and Dixie and about six miles south of the deep sand wells.

Deep Sand Production at Cotton Valley

Of approximately 7500 acres of land located on the crest of the anticlinal fold at Cotton Valley as enclosed within a contourline drawn through the outermost producing wells of the field, only about 2000 acres comprising a narrow band around the perimeter of the fold have been found productive of oil. The crown of the structure, or the center of the field, yields only gas; and very few wells have been drilled there. The oil-bearing area, however, has accounted for more than four and one quarter million barrels of oil during the two years since the discovery of the field, and has averaged more than 2000 barrels per acre. One well flowed more than 91,000 barrels of oil before it was put on the beam. The tract upon which the discovery well is located has averaged 3925 barrels per acre, to date. Although the productive area has been only sparsely drilled, the development of the Blossom sand is being brought to a conclusion following the loss of gas pressure and, with it, the hope of flowing production.

The Cotton Valley Field is chiefly notable, however, for the reason that the deepest producing well in North Louisiana or Arkansas is located there. Early in May, of last year, arrangements were perfected whereby the Palmer Corporation, of Shreveport, undertook drilling of a community deep test for joint account with the Humble, Louisiana, Ohio, Gulf, Woodley, and Crusader companies and other individual lease owners. The Woodbine sand was found to be non-productive; but a gas and salt water blow-out occurred at 4298 feet. The water was successfully cased off with a string of 4½-inch pipe, and the well was brought in again as a dry gasser. Later, a slight spray of light oil was observed. Drilling was resumed, and subsequent tests were made at 4379, 4396, 4419, and 4518 feet without securing any material increase in the spray of oil and without encountering salt water. The hole having been drilled to a total depth of 4623 feet, beyond which it was deemed unwise to venture with the frail (2½-inch) drill stem, it was decided to suspend drilling operations, plug off the last two hundred and fifty feet of the hole, and try the effect of a formation shot in the hard anhydrite logged just below the depth at which the gas and oil were found. Latest reports are to the effect that the hole has been plugged back to a depth of 4380 feet, and that the shot may be placed and discharged some time during the current week. It may be that this extremely hard formation is similar in character to the well-known lime rock in North Central Texas, where it is necessary to resort to the use of heavy charges of nitro-glycerine in order to secure production. If so, the shot may develop oil production in commercial quantity, precipitating another drilling boom in the immediate future.

If not, further testing is to be done in the near future in deep wells now being drilled by the Humble, Ohio, and Forutna companies. The latter is drilling below 4050 feet in its Bible wildcat, which is located in section 8-20-9, about four miles southeast of the nearest production in the Blossom sand. The Ohio Oil Company, one of the most aggressive participants in the deep drilling campaign of this territory, is drilling at 3760 feet and 3165 feet, respectively, in its Hodges No. 1 and Cox No. 1 wells, both located in section 23-21-10, near the deep-sand discovery well and on the crest of the structure as defined with reference to the Blossom sand at 2550 feet. Eight-inch casing was set in the Hodges well at 3484 feet, which will allow the completion of a six-inch hole at 4300 feet or deeper. The Humble Oil & Refining Company is nearing the 4000-foot level in its Cox No. 1, also lo-

(Continued on page 156.)

STATISTICAL SURVEY OF THE LOUISIANA-ARKANSAS TERRITORY AS OF JANUARY 1, 1926

ARKANSAS

Field—	Production One Year Ago	Present Prod.	Percent Decline *Increase	Producing Wells	Average Production per well	Production Discovery to date	Acres Productive	Yield Per Acre	Date of Discov.
Smackover:									
Heavy	63,550	158,025	*148.66	2,205	71.66	165	16,500	6,156	1922
Light	29,710	19,560	34.17	910	21.49		10,300		
El Dorado	7,330	5,875	19.85	c750	c7.83	37¼	9,700	3,840	1921
East El Dorado	3,020	1,950	35.44	c140	c13.92				1922
Stephens	2,105	1,735	17.58	235	7.38	2½	3,200	781	1922
Nevada (Irma)	1,120	1,530	*36.60	31	49.35	1¼	320	3,906	1923
Bradley	†	5	....	1	5.00	...	‡	....	1925
Totals, Arknasas	106,895	188,680	*76.50	d4,272	d44.16	206	40,020	5,147	

LOUISIANA

Haynesville	15,275	11,400	25.37	645	17.67	43¼	6,875	6,364	1921
Caddo Light	9,010	8,235	8.61	865	9.52	107	31,000	3,451	1903
Heavy	2,275	2,605	*14.50	328	7.94				
Homer	6,975	6,035	13.48	512	11.78	53	3,000	17,666	1919
Bellevue	3,575	2,405	32.73	285	8.44	6½	900	7,222	1921
De Soto	850	735	13.53	93	7.90	45¼	10,000	4,525	1913
Red River	3,650	3,065	16.03	389	7.88				1914
Elm Grove	585	585	‡	37	15.81	1¼	1,000	1,250	1918
Cotton Valley	5,640	8,580	*52.12	190	45.15	4¼	b2,010	2,114	1923
Urania	†	600	....	17	35.30	...	a3,700	....	1925
Totals, Louisiana	47,885	44,245	7.60	3,361	13.23	261	57,985	4,501	
Grand Totals	154,780	232,925	50.48	d7,633	d30.51	467	98,005	4,765	

†Undiscovered; ‡Undeveloped; §None; aEstimated, field not yet fully developed. bDoes not include the crest of the Cotton Valley structure, which is productive of gas only; cEstimated; dTotals included estimated figures (c) above. "Production, Discovery to Date" quoted in millions of barrels.

PERSONAL MENTION—MEN YOU KNOW

Donald F. MacDonald has left Casper, Wyoming, on a leave of absence during the winter season to do mineral land valuation work for New York banking interests. He has recently been in Alabama and on the Mexican border. He is now located at 16 Eastover Court, Louisville, Kentucky.

W. G. "Bill" Hanrahan, Vacuum Oil Company scout in the Oklahoma territory with headquarters at Tulsa, made the Houston headquarter office of the company a business visit late last week. While in Houston he visited his brother, R. V. Hanrahan, president of the Humble Pipe Line.

George B. Fuller, field superintendent of the San Antonio district for the Humble Oil & Refining Company, has returned to his Lockhart office after several weeks in Bastrop County where he has been in connection with some extensive drilling being done in that county by the Humble.

Mr. E. B. Wiggins, well known supply man from California, was in Houston last week.

C. B. "Skeet" Hinton has recently opened an office in Dallas for the Williamsport Wire Rope Company. Mr. Hinton has been in the Smackover territory for the Williamsport Company for the past three years. He is an experienced oil field man. Raymond Ford of Houston who has been in charge of the whole of Texas for the Williamsport Company, is spending several days in Dallas going over the new territory with Mr. Hinton, whose temporary headquarters will be the Baker Hotel.

W. S. Laughter, deputy oil and gas supervisor of the Texas Railroad Commission in the Mexia district, returned to his home office late last week from a trip of several days to Marshall and other points in Northeast Texas.

Photo by Rivkin, Tulsa

W. C. FRANKLIN
Vice President and General Counsel Tidal Oil Company, Tulsa, Oklahoma

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J. L. Smith, of the J. E. Shaffer Company of Tulsa, was in Houston for several days last week transacting business for the company.

Charles T. Law, assistant manager of the Desoto Foundry & Machine Company, Ltd., Mansfield, La., was in Houston during the past week.

Lock McDaniel, West Coast manager of the Reed Roller Bit Company, was in Houston during the past week visiting the home office and transacting business matters with the officials of the company.

A. L. Adams, division sales manager for the Transcontinental Oil Company in Texas, died at his home in Fort Worth Monday noon following a brief attack of acute indigestion. Adams was 41 years old, and is survived by his wife, who was visiting relatives in Memphis, Tenn., at the time of his death. Burial will be at Memphis.

J. A. Morehouse of the Oil and Gas Division of the Texas Railroad Commission, headquarters at Houston, was ill several days last week with la grippe.

A. C. Snowden, father of J. O. Snowden of the Tulsa staff of the Prairie Oil and Gas Company, died unexpectedly at his home near Stillwater, Oklahoma, Tuesday, January 5. He was in Stillwater on December 29, and apparently contracted a cold while there, but was not confined to his bed until the day before his death. He was born in Cole County, Illinois, January 29, 1852, and came to Oklahoma 35 years ago. Two sons survive, J. O. and Cleo Snowden.

Henry C. Moore, formerly active in the oil business in Houston, died at his home in Houston Christmas week. Mr. Moore was one of the founders of the Lake Oil Company, was at one time vice president and general manager of the Southern Petroleum Company and formerly in the producing department of The Texas Company. He was born in Vermillion Parish, La., September 6, 1876, and was married to Miss Mayme Morgan, at Temple, Texas, in 1917. He was a member of B. P. O. E. and the I. O. O. F. Mr. Moore had been ill for several months prior to his death. He leaves a widow and two children.

C. L. Waterbury of Tulsa has moved to Fort Worth and established offices on the sixteenth floor of the F. & M. Bank Building as the Texas representative of the Hope Petroleum Company and other concerns now wildcatting in Central West Texas.

How Long Will Our Oil Last?

By Grady Triplett
Staff Representative

IN numerous forms men of the industry have been asking how long the petroleum reserves of the United States will last. The answers are almost as numerous as the questions.

There are two schools of thought in general subject. One may be classed as the government division, although its adherents are by no means restricted to those connected with any of the Federal branches of the United States Government. The other belongs largely to the American Petroleum Institute, where all members are not in accord.

From Washington comes talk of early depletion of the petroleum reserves of the United States. This has resulted in the appointing of the Federal Oil Conservation Board by President Coolidge. When the American Petroleum Institute speaks, the words sound of long life for the nation's petroleum reserves.

The Federal Oil Conservation Board and the Committee of Eleven are the results of these divergent opinions as to the life of the oil deposits in American rocks. The one resulted in the forming of the other.

In its recent report the Committee of Eleven painted a rosy picture of the future of petroleum in the United States. The Federal Oil Conservation Board was not named to inquire into the petroleum deposits of the nation with the view of determining how long they will last. The efforts of the government side of the question sought to do that in 1921, the result being made in January of 1922, when the United States Geological Survey, in cooperation with the American Association of Petroleum Geologists, estimated the petroleum reserves of the United States as 9,150,000,000 barrels.

Estimate a Guess

It is the opinion in the petroleum industry that the work of the Survey at that time played a part in the naming of the Federal Oil Conservation Board, which is the chief reason for classing one school of thought as that of the government.

Other than the estimate, nothing was ever printed on the efforts to determine petroleum reserves as of January 1, 1922. Perhaps if more had been printed the report would have been better understood. It is known, however, that members of some of the State committees were not in accord on the estimates that were given.

At the present rate of depletion, the petroleum fields of the United States will be drained in another ten years, if only 9,150,000,000 barrels of oil remained in the ground January 1, 1922.

Events since the publishing of those figures have branded the report as little more than a guess, which perhaps is just about all that can be done in calculating petroleum reserves. It would be interesting if the working of the committees filing the reports could be studied, just to see how well the men were doing their calculations.

One wonders if a field of Tonkawa type was considered, with four producing sands. Chances are nothing of the sort was ever included in the Oklahoma estimate. Later there have been Braman, Thomas and other small pools, developed as the result of core drilling. It seems a certainty that nothing of their type was thought of when the report was made.

Gulf Coast Reserves

It is a signal fact that the district credited with the highest total of petroleum reserves January 1, 1922, has given but few oil fields since then, while its total production has been low ever since, the Coastal Plain of Texas and Louisiana. Its reserves was placed at 2,150,000,000 barrels. Yet not a pool of the 50,000-barrel a day type has been uncovered there since 1922. This cannot be taken as a contention that the Coastal Plain will not produce its quota of crude oil, for it is known that flush yield is not essential to big production.

Doubtless the men responsible for the 1922 estimate considered oil production in the light of drilling and producing methods then known.

A lot of surmising can be done, with the 1922 estimate as a basis. The estimate has been criticised, frequently in justice, often unjustly. Some one once made the remark that it might be good policy to estimate the potential oil reserves of the nation but poor policy to make the estimate public.

It does not seem unfair to conclude that the estimate of 9,150,000,000 barrels of oil remaining unproduced in underground rocks January 1, 1922, was too low. Certainly there are few who expect depletion of oil reserves within ten more years.

There is shale oil production. The mining of oil is a practical venture. Deed drilling, air pressure, air cleaning and other improvements in producing methods have added to the possible production of oil fields of the United States. And inventive genius is not through with devising methods of gaining still larger returns from the oil-bearing rocks.

Following some rapid work, the report of the Committee of Eleven was made public just a few months back. It has elicited just as much criticism as did the estimate that came through the United States Geological Survey in 1922.

A. P. I. Estimates

Whether the work of the Committee of Eleven deserves such or not, it has created the impression that the American Petroleum Institute leans toward the opinion that depletion of the petroleum reserves of the United States is just a bugaboo, amounting to nothing more than the mythical characters by which mothers are given to scaring their young into good behavior.

This criticism is unfair. Still there is no mistaking that the Committee of Eleven went to the other extreme in its findings. If all the territory listed as possibly productive for oil in the report of this committee is in reality good prospective territory, then the oil industry is passing up some wonderful chances to take leases at low figures.

Science never has been able to agree on the source of petroleum and all the conditions that create it and deposit it. But men of the geological profession do agree on the point that oil is not now being created. No evidence of such has ever been brought to light.

If that is true, then the oil wells of the United States are drawing from a storehouse, which is not being refilled. And under that condition there is an end to the petroleum of the United States and of the world.

The two reports, now somewhat in conflict, are not the only such moves, but they are the outstanding efforts of recent years to determine the extent of the petroleum reserves of the United States. With such answers to one question, the layman is forced to draw

(Continued on page 147.)

Venezuela Oil Concessions Ltd.'s Material yard at La Rosa

Venezuela Becomes Important Factor in 1926

Ratio of increase during last year points to possible 50,000,000 barrels this year

By A. R. McTee
Staff Representative

IN any consideration of petroleum during 1926, Venezuela must have an important place, for that country is bound to become a world factor in oil within the next twelve months. Already gasoline from Venezuela crude is being sold in New York. Venezuelan fuel oil burns in the ships of several nations, and a good sized percentage of the money being spent in development and exploration work is changing hands in Venezuela.

In districts that less than three years ago were nothing but tropical jungles there are now well-ordered fields producing oil in amounts ranging from 5000 to 30,000 barrels daily. From four major fields and a few smaller ones in the vicinity of Lake Maracaibo, are being recovered about one and two-thirds million barrels of oil per month.

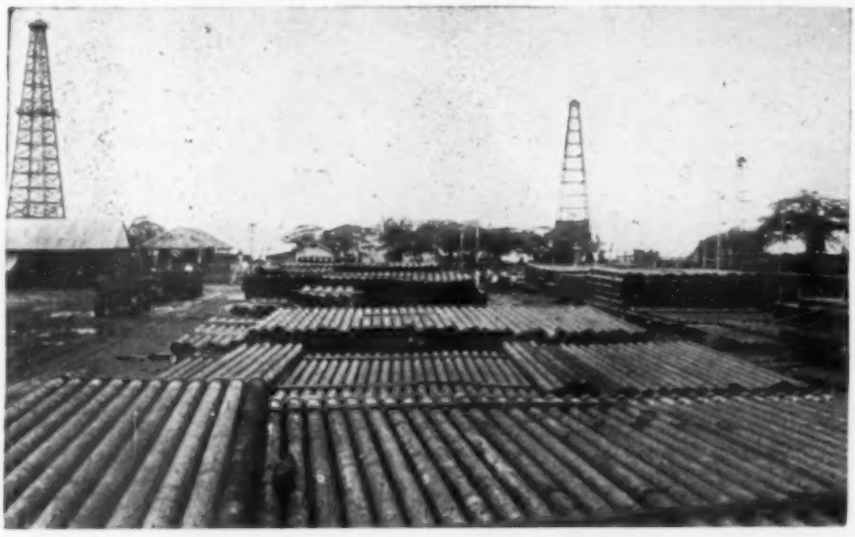
Total recovery for last year will probably be 21,000,000 barrels. Up to December first, 18,270,600 barrels had been reported, with the yield for November well above 2,000,000 barrels, and December will likely show an increase over this amount sufficient to bring the total for the year above the 21,000,000-barrel mark. This is an increase of almost three times the recovery for 1924, only 8,000,000 barrels being produced that year.

A conservative guess at the yield for this year would probably be 50,000,000 barrels, a figure not unwarranted if based on what has been done within the past two years.

It is quite probable that such an increase can be absorbed by the crude market without any bad effects inasmuch as Venezuela production is fairly well distributed between American and European consumption. Also the increase is offset to some extent by the natural production decline in the United States and Mexico, as well as in Poland and Russia. World production decreased 9,751,000 barrels during 1924, as compared with the previous year. Thus it might be said that Venezuela is merely stepping in as some of the older fields lose their dominant positions.

There can be no doubt, however, about Venezuela oil being a competitor of similar grades produced in the United States, due to the accessibility of Venezuelan fields. In his Venezuelan Oil Handbook, Michael O'Shaughnessy points out that "The proximity of the Venezuelan oil fields to the refineries on the eastern seaboard of the United States, as well as to the fueling stations at the Panama Canal for oil burning shipping, is an important factor in the necessity for their rapid development. Maracaibo is 1885 miles sailing distance from New York. A tanker can make the round trip in 18 days. Maracaibo is forty miles nearer to New York than Galveston, 140 miles nearer than Tampico, and over 3000 miles nearer than the shipping points of the California fields. Forty-three days are required for a tanker to make the round trip from California to New York as against 18 days from Venezuela."

Four fields underwent the bulk of development in Venezuela last year and are responsible for the most of the production. These are: La Rosa, Mene Grande, La Concepcion and La Paz. El Mene is



Pipe yard near La Rosa field, Venezuela Oil Concessions, Ltd.

also producing oil, but its output varies so that the field cannot be counted on for any definite amount. The combined output of these fields averaged slightly more than 53,365 barrels daily during 1925, with La Rosa leading.

La Rosa proper now has an area approximately 1350 yards long by 450 yards wide. Up to the end of July 4,000,000 barrels of oil had been recovered. There are now about 77 producers in the field. A total of 87 wells have been drilled, but 10 of these have been dry. The field is operated by the Venezuelan Gulf Oil Company, the Venezuelan Oil Concessions, Ltd. (Dutch Shell), and the Lago Petroleum Corporation. La Rosa has storage capacity for about 1,000,000 barrels of oil. In addition to field storage, the Gulf has six 55,000-barrel tanks, Venezuela Oil Concessions has eight and the Lago Petroleum Corporation has four. Three wharves accommodate the lake tankers at La Rosa.

Remarkable progress has been made in handling sand problems at La Rosa during the past twelve months: through a scheme of staggering the wells so they will not directly offset each other, and by drilling wells farther apart, much of the difficulty with sand has been removed, enabing companies to push forward in drilling their properties. Three distinct producing horizons are now yielding oil, the third having been discovered last year. Lago Petroleum Company's No. 9 marked the discovery of the third and deepest sand known in the field. It made an initial flow of 5000 barrels of 26 gravity oil from 2240 feet. It is significant that the deeper sands in Venezuela are showing up with lighter oil, and it is predicted that crude with as high a gasoline content as that produced in the Mid-Continent will be found in deep sands in the Maracaibo Basin.

Ambrosia Extension

La Rosa was extended approximately three miles to the north late in 1925, by the Lago Petroleum Corporation's No. 1 Ambrosia. This well showed 4000 barrels flush yield from 1378 feet when completed. The Ambrosia extension, as it is called, opens an entirely new area for development, and Lago plans to do considerable drilling in the area this year. Already a camp is being constructed on the lake shore near the well, and locations have been staked for three new tests. No. 1 is in the lake, in an area covered by 12 feet of water. Half way between La Rosa proper and the Ambrosia extension the Gulf has had a good showing in its Rodriguez No. 4 and has staked a second location. Lago has a four-inch line from the Cabimas terminal to the Ambrosia well, and the Gulf has completed an eight-inch line to La Mision, just north of the village of Ambrosia.

Mene Grande, the field next to La Rosa in size and output, has 37 wells, all of which are producers. Not a dry hole has yet been drilled in this field. An important extension was made late in July last year by the Caribbean Petroleum Company (Dutch Shell), in its No. 37, located two and one-half miles south of the center of the old field, and about 700 yards south of No. 38, formerly the farthermost south producer. The stretch of acreage between No. 38 and No. 39 will be tested this year. Development during 1925 showed that the further south and east Mene Grande is proved the bigger the wells.

Caribbean Petroleum Company operates a refinery at San Lorenzo, near Mene Grande, and handles about 2000 barrels of crude daily. Two pipe lines connect the field with the company's terminal on the lake. The balance of production at Mene Grande is shipped to the Dutch Shell's 50,000-barrel refinery at Curacao. Caribbean ships about 1,000,000 barrels of crude from Mene Grande per month, and could easily double its output if it so desired.

The El Mene field is continuously being extended toward the west. Two pipe lines, one a four-inch, the other a six-inch, connect the field with Altagracia, the lake terminal, where the output of the field is loaded into tankers. British Controlled Oilfields Ltd., controls the field and is doing the most of the operating. El Mene crude is light, ranging around 38 gravity. A deep test is now being drilled four miles from the present proven area. Due to sand troubles, production at El Mene fluctuates between 6000 and 12,000 barrels. usually. About half the wells drilled are dry.

Recenty the Gulf purchased acreage in the southeastern part of Miranda, and drilling on this block may prove the El Mene structure in Miranda.

La Concepcion has an output of about 100,000 barrels per month, and is being developed slowly by the Venezuelan Oil Concessions, Ltd. The field is on the west side of the lake about half way between La Paz and the lake. A pipe line has recently been built from Concepcion to Punto Piedras on the lake. Venezuelan Oil Concessions Ltd. has a terminal at this point, with four 55,000-barrel storage tanks.

La Paz, west of Concepcion, produces about 50,000 barrels a month, but has a big potential output capped awaiting transportation facilities. Venezuelan Oil Concessions, Ltd., controls the area. Several wells of tremendous output have been completed in this field and are capped. The area looms as one of big output eventually.

In the district of Colon southwest of

Looks like Goose Creek or Caddo Lake, but it isn't. A scene from the La Rosa field in Lake Maracaibo

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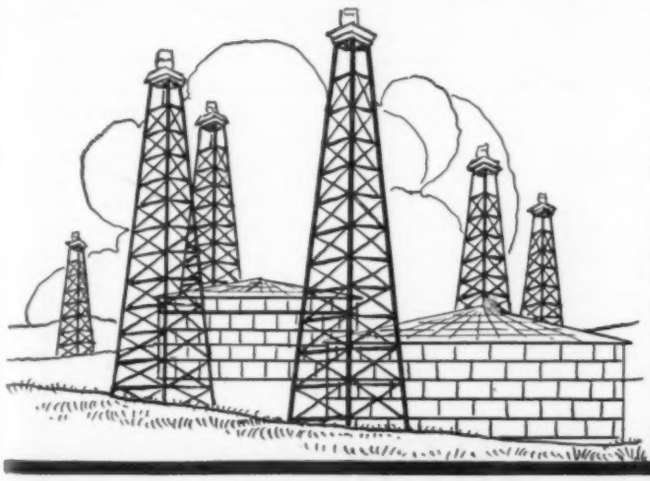

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Say you saw it in The OIL WEEKLY

Lake Maracaibo, the Colon Development Company, another subsidiary of the Dutch Shell, has discovered oil at Rio De Oro and Tarra, but very little work other than testing has been done in either of these fields, and the wells completed are capped awaiting further developments. Both fields have considerable potential output, however.

Exploratory Drilling

Exploratory drilling during this year will be done in several parts of Venezuela, with the greatest amount concentrated in regions adjoining proven fields around the eastern and northern shores of Lake Maracaibo.

The Standard of New Jersey is testing several localities in the eastern part of the British controlled Buchivacoa lease, located to the north and west of the El Mene field. A drilling program covering three or four years is just now getting under way. Development will necessarily be slow on account of the tremendous amount of preparatory work that has to be done in exploiting any tropical territory, and more especially the kind found in Venezuela.

Adjoining the district of Buchivacoa to the east, in the district of Democracia, the Standard of California and the Beacon-Sun Company plan extensive testing operations. Drilling started in November, and is being done with small gsaoline rotary outfits. The first wells are to be about two and one-half miles north of Urumaco. The light portable gasoline rigs have been very successful in test work in Venezuela, and their popularity for this work is increasing.

Near Lagunillas, in the district of Bolivar, between the fields of La Rosa and Mene Grande, the Venezuelan Oil Concessions, Ltd., is building a big camp preparatory for a drilling program to test the Lagunillas area.

West of the lake in the Mara territory the Standard of New Jersey, Oronoco, and the Gulf are to do considerable testing. A good gas well was drilled in this district by the Caribbean some time ago.

In the district of Urdaneta, bordering on the lake south of the district of Maracaibo, the Standard of California, and the Omnium Oil Development Company, Ltd., are to test concessions. Before it sold its holdings in this territory. The Texas Company drilled eight holes, all of which were dry. These tests were only 300 feet deep, however, and were considered too shallow to be of any significance in giving geological information about the territory.

An oil seepage typical of the kind commonly found in Venezuela. The hand and compass are shown in order to give an idea of the size of the bones and fossils. The head bones of a prehistoric monster is seen to the right of the hand.

To the west of Urdaneta, in the Perija territory, good showings have been found in the Petroleo area and a pool is known to exist there. It is said that a good well could have been completed, but title litigation stopped drilling. The Standard of New Jersey will test leases owned by the Maracaibo Oil Exploration Corporation, in the southwestern part of this district.

Central Venezuela

In Central Venezuela the Gulf has concessions covering 1,300,000 hectares of land, but is not testing it yet. The concession is in Anzoategui.

The Sun Company has contracts to make selections from free lands in the district of Mellada, State of Guarico.

The Pantepec Petroleum Companies, Maxudian Petroleum Company, and the Andes Petroleum Corporation are said to have also acquired big tracts in Central Venezuela, but these companies are not doing active testing now.

In the State of Monagas, bordering on the northeast coast of Venezuela, the Standard of New Jersey is drilling a few tests. Near the town of Maturin several wells have been completed, but no production has yet been developed.

Many engineering problems not known to operators in this country are encountered in Venezuela. Some of these have retarded operations, but taking everything into account, development has progressed with remarkable rapidity. Production problems are being overcome laregly through the use of modern field equipment in the hands of skillful workmen. In practically all the fields only the most modern and up-to-date methods are permitted.

Transportation of the oil has been one of the hardest problems to handle, but this is being successfully met by a fleet of lake tankers. Because of the shallow depth of Lake Maracaibo, only tankers drawing eleven and one-half feet of water can navigate it. Capacity of these boats is from 12,000 to 16,000 barrels of crude. The Gulf owns a fleet of six tankers: Caribbean owns about 16; Lago Petroleum operates 10, and there are a few others. These boats take the oil to Curacao, Oruba and Paraguana. On the Island of Oruba the Lago Petroleum Corporation has a refinery under construction and will probably be putting crude through its stills before many months. The Dutch Shell has a 50,000-barrel refinery at Curacao, where most of its Venezuela production is refined. The Gulf has a terminal on Paraguana Peninsula, from where it transships its Venezuela oil to the Port Arthur refinery.

There has been some talk of dredging channels through Lake Maracaibo to make it possible for ocean-going tankers to load oil at the different terminals. In view of the fact that the lake is fed by numerous rivers of short length that continually deposit silt on the bottom of the lake, it is not probable that such an undertaking would be a success. Continuous dredging would be necessary, and even if it were possible to keep the channels cleaned out the expense would be more than it is under the present scheme. An enormous sand bar at the mouth of the lake would also have to be removed.

Most of the crude produced in Venezuela is comparatively heavy.

Common type of oil seepage, showing how the heavy oil solidifies in cone shape on being exposed to the air

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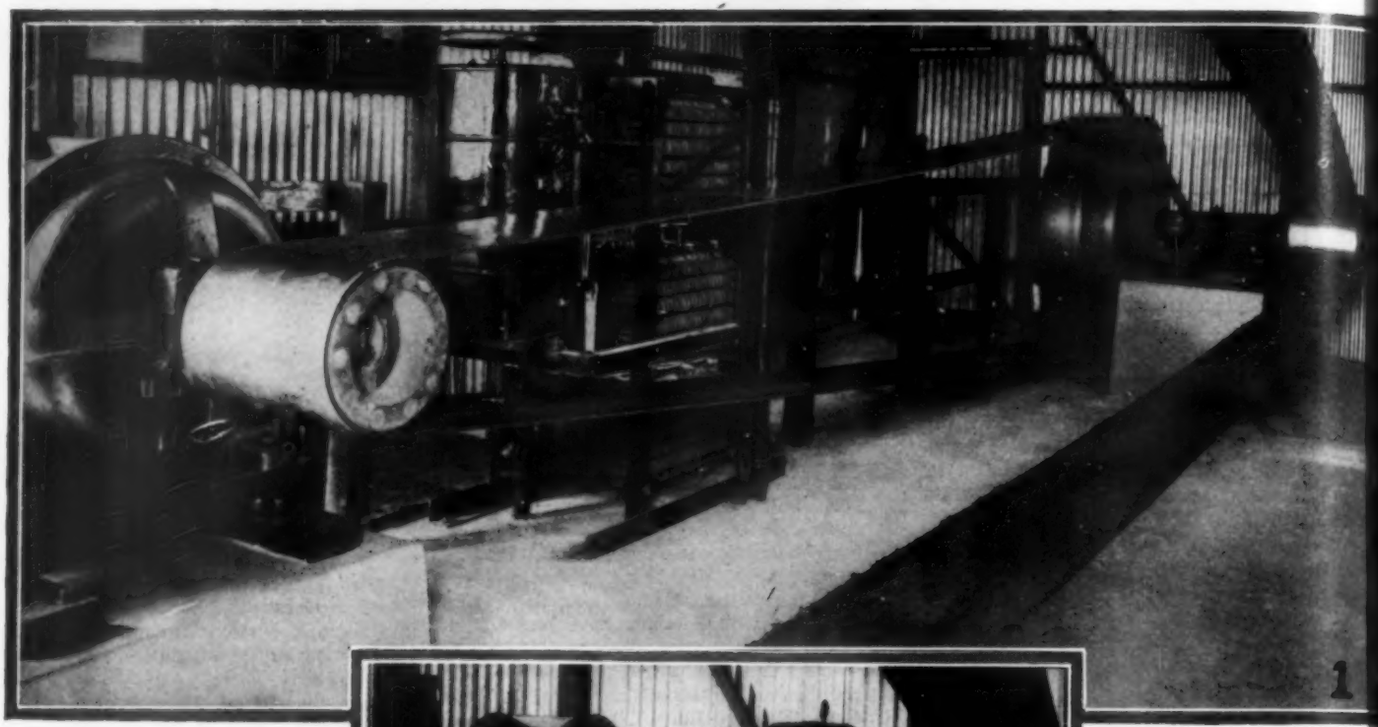
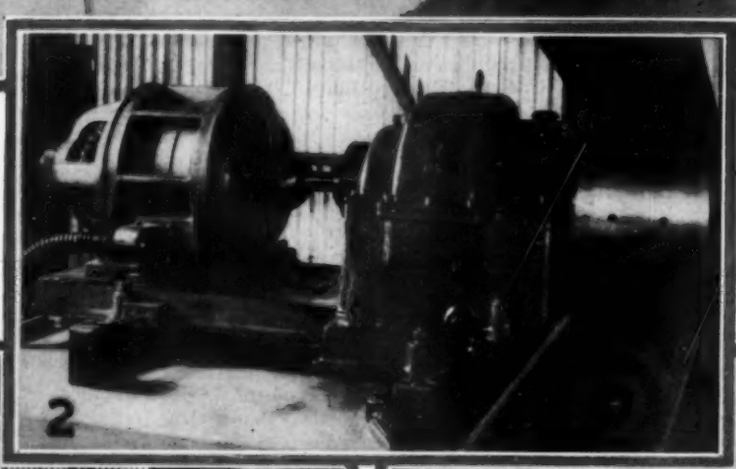
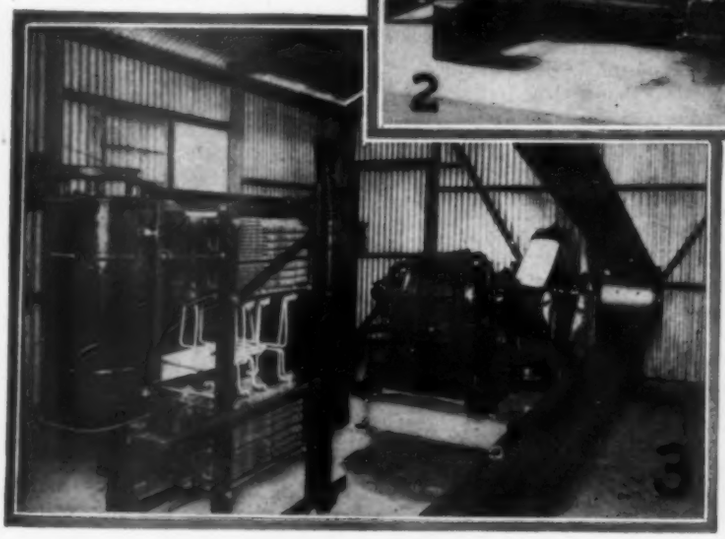
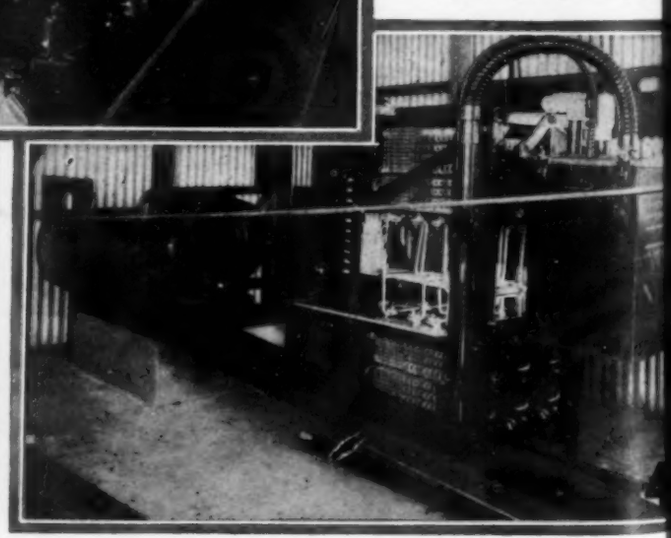


1. *A 50/20 HP two speed oil well pumping motor equipment on lease of the Associated Oil Co., Huntington Beach, Calif.*
2. *A 35/15 HP motor equipment with herring-bone reduction gear unit on same lease.*
3. *A 35/15 HP motor equipment with silent chain driven countershaft on Santa Fe Springs lease of the same company.*
4. *A 35/15 HP motor equipt with belt drive on Huntin Beach lease.*
5. *A 100 HP induction motor dr centrifugal pump for oil loadi Los Angeles Harbor.*
6. *A 40 HP induction motor silent chain drive operatin ciprocating oil gathering pu*







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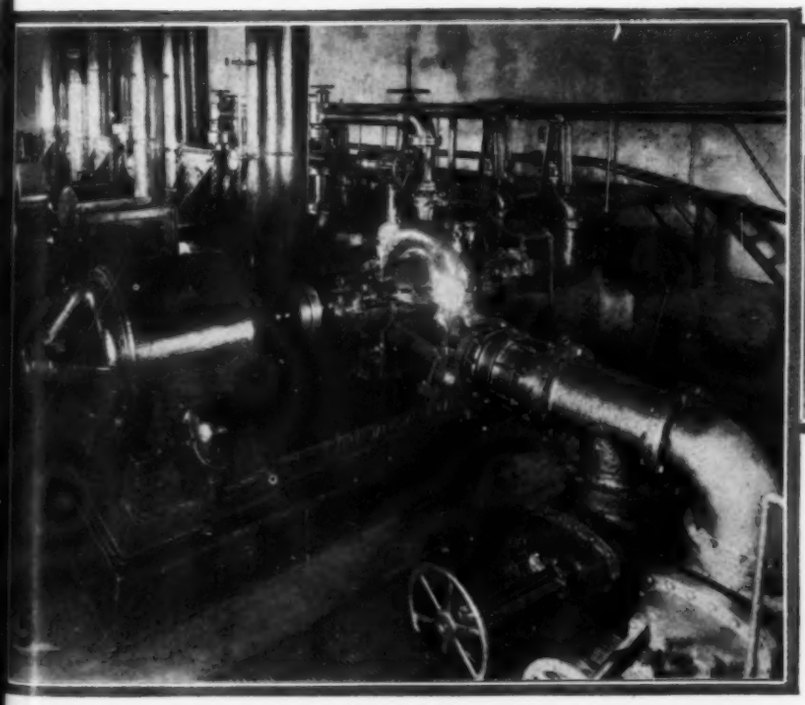

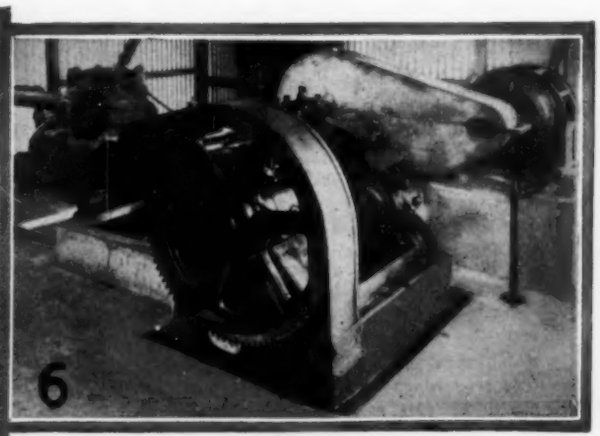

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ELECTRIC

SALES OFFICES IN ALL PRINCIPAL CITIES

Deeper Zone Offers Possibilities For Englewood Future

By Glenn D. Robertson and Joseph Jensen
Geologists of the Associated and Pacific Companies

Before the Pacific Section, American Association of Petroleum Geologists

THIS paper should not be considered an assemblage of original thoughts, for they have come from so many people that it is almost impossible to extend credit individually. Hence, if the ideas of someone else are voiced herein, he may claim them for his own, if he can still recognize them.

Inglewood oil field occurs in what are generally known as the Baldwin Hills, about two and one-half miles northwest of the city of Inglewood. Part of the field is within the limits of Culver City. The field occupies parts of sections 7, 8, 17 and 18 of township 2-south, range 14-west. The Baldwin Hills lie in the general line of uplifting that extends from Beverly Hills to Newport and contains the Rosecrans, Dominguez, Signal Hill and Huntington Beach fields.

Heavy Oil

Beverly Hills and Baldwin Hills fields produce heavy oil, varying in gravity from 14 to 22 degrees, while the other fields produce oil varying in gravity from 15 to 42 degrees. The first two named are comparatively shallow fields, for their oil has been developed chiefly above 3000 feet. On the other hand, the greatest production from the other fields has been secured below 3000 feet.

The Baldwin Hills have long been considered as a possible source of oil. Land was leased there more than 20 years ago, a particularly attractive and suggestive feature being two gas wells located at the northwest end of the hills. The ease with which the field has been developed this year indicates that had the earlier prospectors hunted in the right place, they would have had no difficulty in exploiting the field in the early days of California's oil development.

First Deep Test

The first deep well was drilled to 4500 feet by the Bartola Oil Company in 1917, in the northeast quarter of the northwest quarter of section 21. The Standard Oil Company drilled its Cienega 1 and 2 on the Baldwin property between 1918 and 1920 to depths of 5010 and 5172 feet, respectively, in sections 8 and 9. One showing of oil at 1530 feet was reported in Cienega 1. A recent test hole, drilled alongside of Cienega 1 to a depth of 1781 feet, using continuous coring, failed to find any evidence of this oil showing.

In 1922 the "57" Petroleum Corporation began drilling its Casserini 1 well, near the old shallow gas wells referred to above. The "57" Petroleum Corporation drilled one gas well that furnished an excellent blowout. Casserini 1 subsequently was carried to a depth of 4836 feet, the last 1000 feet of hole being drilled by the Associated Oil Company in the summer of 1924.

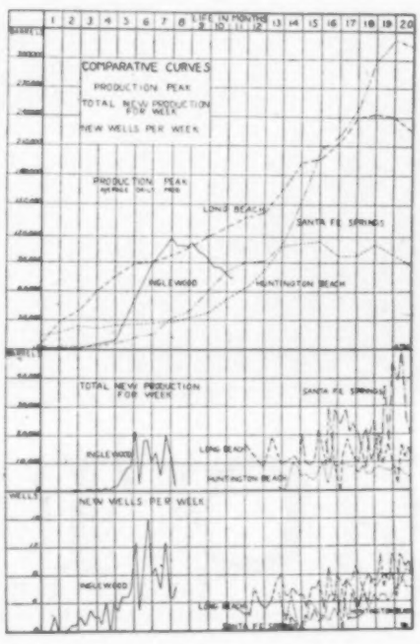
In 1923, the Pacific Oil Company drilled Baldwin 1 to 6757 feet and its Baldwin 2 to 4076 feet, in sections 5 and 9. A single oil showing in Baldwin 1 at 3895 feet was all the encouragement received.

Credit for discovery of oil in the field belongs to the Standard Oil Company as a result of finding oil in its L. A. Investment 1-1. This well began drilling on March 3, 1924, and found evidence of oil within 10 days. It finally was completed as a commercial producer on September 28, 1924. Meanwhile, the Bush well, known also as the Mohawk well, began drilling. Tar sands were found at 1500 feet early in the spring, but it was not until December 31 that it was completed at a depth of 2304 feet as a 250 barrel well.

Drilling Drops to Minimum

The next four months saw the completion of 23 wells, furnishing a daily production of 5420 barrels of oil, or only 236 barrels per well. Within three months, 97 additional wells were completed, giving the field a peak production of 116,098 barrels per day from 120 wells, or an average production of 967 barrels per well. November 10th the field had 155 producing wells, making 74,359 barrels of oil or an average of 480 barrels per well. Drilling activity has dropped to a minimum, owing to the fact that the areas in which competitive drilling was necessary have been completely drilled. Areas still undrilled are being developed in a less intense manner.

Oil produced in the field all comes from the Upper Pliocene formation.



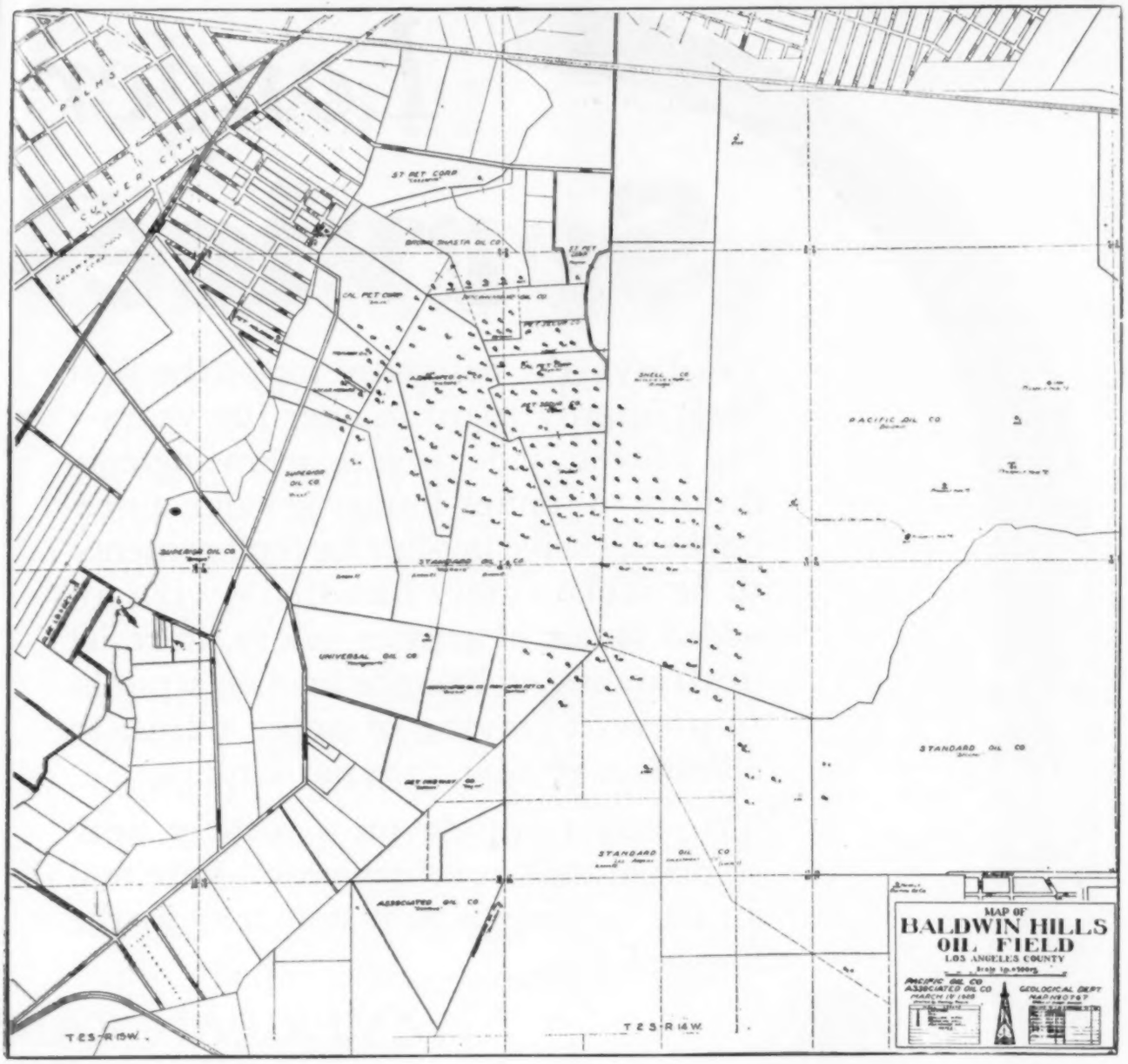
Field Topography

The Baldwin Hills are more or less rectangular in shape. The greatest elevation is 513 feet above sea level. The hills have bold escarpments on their northern and western sides. These escarpments were at one time regarded as conclusive evidence of faulting, particularly along the northern side of the hills, but it has been proven by core drilling that there is no fault on the northern side of the hills. The northern escarpment is recognized as the remnant of a stream channel which joined the Los Angeles River. The western escarpment is regarded as the scarp of an oil estuary that extended easterly from the ocean to Culver City.

The eastern side of the hills slopes off gradually to the Los Angeles plain; the southwest portion slopes gently to Centinela Creek, while the southeast portion joins the general line of uplifting that extends southeasterly from Bevery Hills to Newport. The hills are cut diagonally from northwest to southeast by two erosion channels that drained northerly and southerly. These channels make so wide a cut that they suggest the existence of a water course of considerable magnitude. The eastern section of the hills is larger and about 96 feet higher than the western part. Undoubtedly the cause of the bi-secting of the hills is not due wholly to stream action but to the presence of a fault having a throw of 350 feet to 400 feet. The western side of the fault was dropped.

Stratigraphy

Six formations appear in and adjacent to the hills. The two youngest of these are the recent black soils and re-



cent red soils. The next older are the sands, clay, and gravels belonging to the Quaternary Pleistocene. The Quaternary Pleistocene is divided into two parts, the upper one consisting of hard red sandstone, hereinafter called "Rimrock sandstone". The Upper Pliocene or Fernando, is found on the surface east of the fault rather extensively. It only occurs west of the fault on the California Petroleum-Smith lease, where it was exposed during the summer of 1924 by hydraulic development of a sand and gravel pit. North of the hills, Upper Pliocene has been exposed in sever trenches dug by the City of Los Angeles in constructing its outfall sewer. Beds of undoubted Lower Pliocene age have been identified from core samples secured in drilling. The dividing line between the Quaternary Pleistocene and Upper Pliocene cannot be drawn in the field, but sufficient evidence has been secured to establish the fact that the two formations are present.

Recent Black Soil

This soil covers the flat north and west of the hills. It is fine sandy loam, high in organic matter. In some places it almost merges into peat deposits. Interbedded with it are fine alluvial sands. This soil varies in thickness from two to more than 30 feet. In some places it lies directly upon the Pleistocene gravels and sands; in other places upon the massive Pliocene shales. It may represent soil formed in a lake that lay north of the hills.

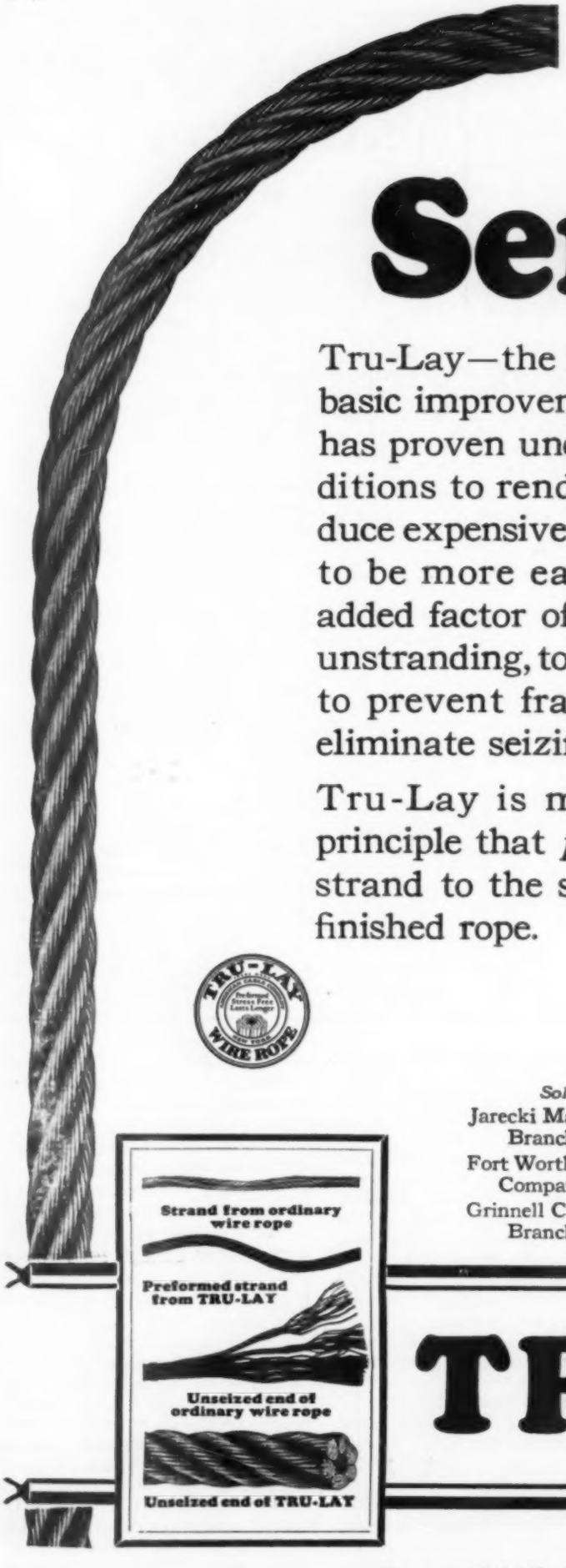
Recent Red Soil

This soil covers the southern and eastern borders of the hills. It is a mixture of coarse and fine sand, gravel, and clays, representing a residual soil due to weathering in place of the Pleistocene sediments below. Its red color is probably due chiefly to the oxides of iron, but pink and red feldspars are present. When the soil is reddest it is quite free from organic matter and packs very hard.

Quaternary Pleistocene

This formation occupies the entire western and southeastern parts of the hills and forms a capping on the ridges in the northeast part of the hills. It varies lithologically from place to place, both horizontally and vertically. It is thickest on the western, southern, and eastern borders of the hills. In the north central part of the hills, east of the fault, it occurs as a thin capping on top of the highest ridges. In this locality the basal bed of hard, rusty conglomerate is well exposed in many places. It is separated from sands and sandy shales below by an erosional unconformity.

An excellent section of the Upper part of the Pleistocene is exposed on the west side of the hills near the center of the Vickers property and ad-



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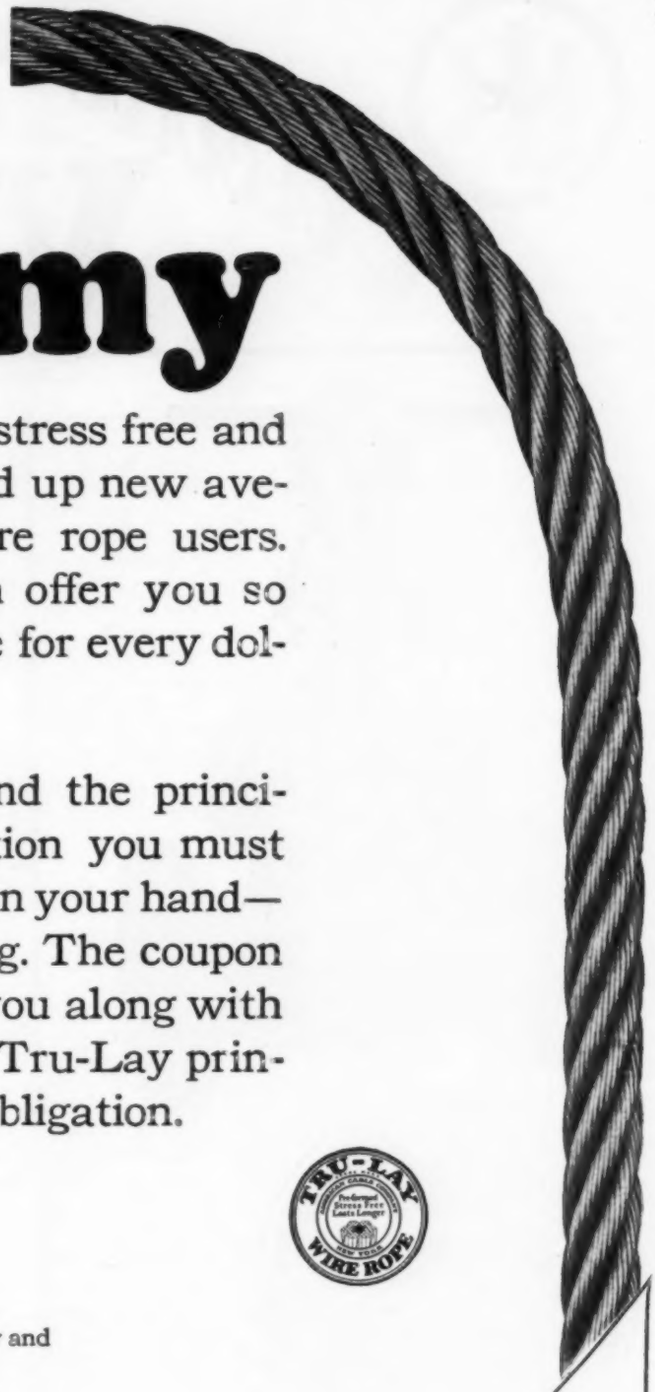

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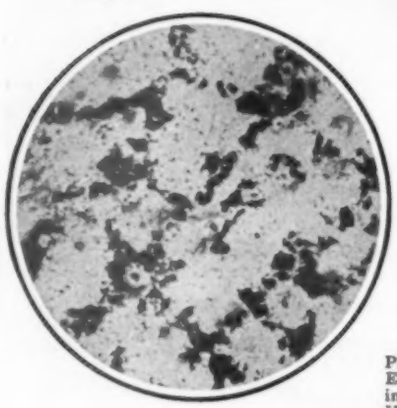

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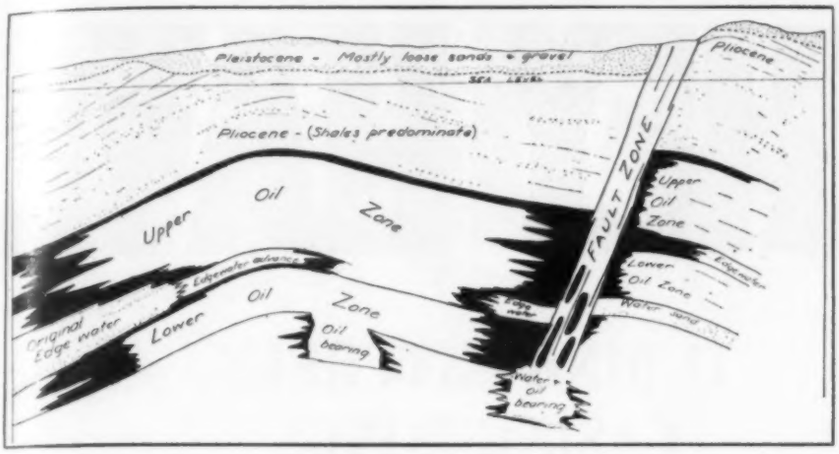


jacent to the producing oil field. At this place about 250 feet of sediments are exposed. The uppermost bed is a hard red sandstone, about 12 feet thick, which we have called "Rimrock sandstone". In this part of the field it forms a small butte or table land. Its characteristic color is red or reddish pink, mottled with gray. The hardness of the Rimrock sandstone seems to be due to lime in the upper layers thereof. Lower down it becomes coarser and not so well sorted. The Rimrock sandstone is particularly well developed in the southern half of the hills. While this bed can readily be traced and followed, it has not successfully served as a key to solving the underground structure because of the unconformity between the Pleistocene and Pliocene. It does however, furnish evidence of faulting.

Probably 400 Feet Thick

A partial section of the Pleistocene or San Pedro formation exposed on the surface is as follows:

12 feet, "Rimrock sandstone."

50 feet; Coarse and fine brown sands with some grey clay and earthy streaks.

25 feet; Coarse brown sandy shale with some finer streaks. Color is grey where not badly weathered.

20 feet; Dark gray and rusty organic clay shale. Contains much vegetable matter.

30 feet; Loose coarse grey sands high in white feldspars.

80 feet; Brown and gray sands and gravels.

The maximum thickness of the Pleistocene in the hills is not known, for the rotary drilled wells of the oil field have furnished poor and unsatisfactory logs. Probably 400 feet would represent a fair estimate of the maximum thickness developed in the hills.

Used for Road Building

In several places, these Pleistocene sands and gravels are being removed from the pits for use on roads and for building purposes. Most of these excavations are in the formation west of the fault. One pit on the California-Petroleum-Smith lease occurs at an elevation of about 300 feet. It has been made by hydraulicking. Two phases of the Pleistocene sands are shown. The oldest rests with marked angular unconformity upon the Upper Fernando shales. These sands are brown, yellow and white in color, very loose, and quite uniform in texture. They are distinctly cross bedded. Above them lies an irregular deposit of brown sands that are not so well washed and are more massive. Neither of these deposits seems to contain any fossils.

An old gravel pit just over a low saddle to the south gives an excellent exposure of a coarser phase of the Pleistocene. In this pit there is much more gravel than sand. Limonite has stained it a rusty brown color. A four foot bed of sandy clay contains marine mollusca of Pleistocene age. To the east, less than 2000 feet, another clay bed is exposed in the gravel pit on the Moynier property, where marine fossils of the same fauna as those in the pit on the west side of the hills were found. The Moynier water well drilled nearby went out of gravel at 80 feet and was in massive gray Fernando shale at 125 feet, which was the bottom of the hole.

Basal Conglomerate Lowest Member

At the base of the sands and gravels of the Pleistocene is a basal conglomerate, which is the lowest member that can be definitely traced and mapped. Its age is definitely Pleistocene, for a good collection of distinctive Lower San Pedro Pleistocene fossils were found in rocks that are stratigraphically below it. These rocks consisted series of 50 feet to 150 feet of brown, yellow and gray sands and sandy shales. The contact between these later beds and the conglomerate above is very definite and easily traceable, but the contact between this series and the Fernando below cannot be identified. These brown, yellow, and gray sands and sandy shales represent the lowest beds containing Pleistocene fossils.

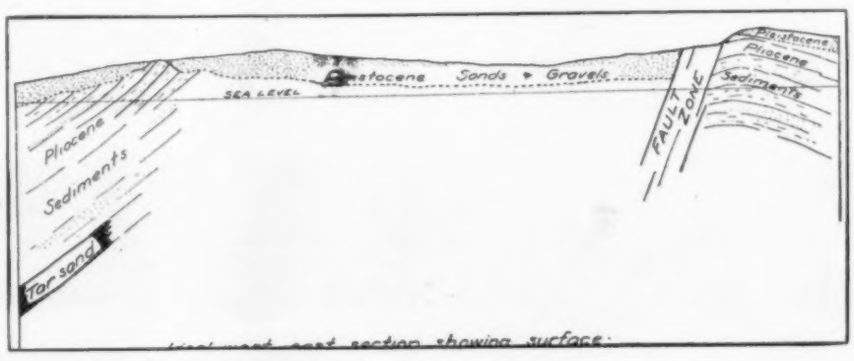
Pleistocene deposists also occur on the flat north of the hills around the Pacific Oil Company's Baldwin 1. Here it is exposed as a thin layer in the sewer trench and is covered by the recent black soil. (Numerous Pleistocene fossils were collected, making certain the identity of the beds.)

Tertiary Pliocene (Upper Fernando)

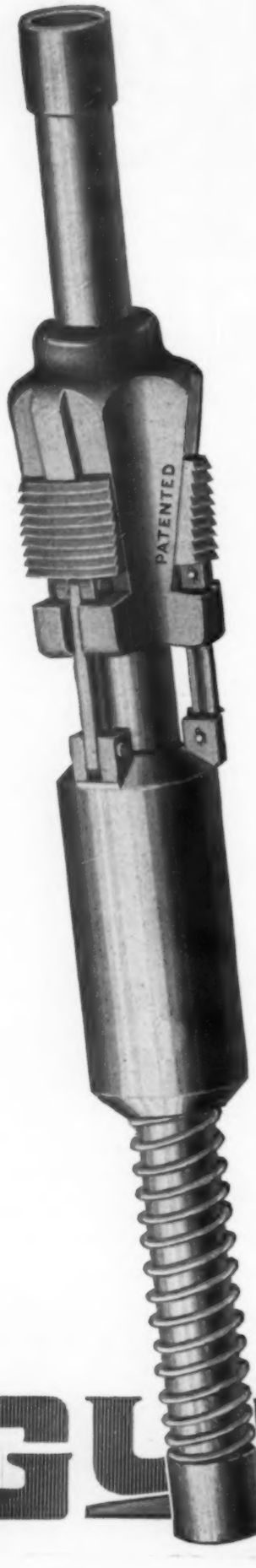
This formation is only exposed at a point west of the fault; namely in and near the hydraulic gravel pit. A narrow strip of formation lies adjacent to and on the east side of the fault. This formation also occupies the bottom of all of the northerly draining gulches on the Baldwin property on the north side of the hills. It is also exposed in the sewer trenches in the flat north of the hills. Throughout the hills it underlies all of the Pleistocene beds above referred to. Definite Pliocene mollusca and foraminifera were found in the beds east of the fault at an elevation of about 400 feet on the north front of the Baldwin Hills. Collections of Upper Pliocene fossils were made at ten different points east of the fault.

In general, these Upper Fernando shales are very massive with bedding very indefinite in most places. Frequent bedding occurs in the formation, as shown by core test holes, at about 1000 feet below the surface. Where bedding is found at the surface, it appears to be mostly due to a slight change in the size of the grains that make up the beds.

Perhaps the most significant occurence of Upper Fernando, or Upper Pliocene, is the exposure made in the hydraulic gravel pit on the Smith property in the northwest end of the hills. Here an excellent outcrop shows well bedded, light buff colored sandy shale that strikes N. 10 degrees E. and dips N. 35 degrees W. This is the steepest dip found in the hills. Where this particular shale outcrops on the surface,



THEY HAVE



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it has so badly weathered that the steep dip cannot be identified.

Structural Geology

The Baldwin Hills are near the northern end of the general line of uplifting that extends southeasterly to Newport. Most of the prominent topographic features in this general uplift have been proven to contain anticlines with commercial oil fields. The most prominent of these topographic features is the Baldwin Hills.

After these anticlinal structures were made, the resulting hills were subject to a long period of erosion and base leveling before they were covered by Pleistocene sediments. By this time the greater part of their growth had been completed. This resulted in making a very marked angular unconformity between the generally flat Pleistocene sediments and the folded Pliocene beds. At Huntington Beach over 1200 feet of sediments were removed from the top of the fold before the Pleistocene sediments were deposited. Of course, where both the Pliocene and Pleistocene had low dips, this feature would be noticeable along the structural high points of the general uplift; hence, the significance which attaches to the steep dip observed only in the hydraulic gravel pit.

Elongated Dome

The Baldwin Hills represent an elongated dome. Those beds that would have been associated with its northern plunge and western limb have been removed by the erosion which made the escarpments referred to under "Topography". The remainder of the hills to the east and south still represent the broad extended limbs and plunge of the anticlinal structure. Before the oil field was developed, this condition was not understood. It was not until about 1921 to 1923 that the significance and importance of the fault running through the hills were recognized; and it was not until late in 1924 that definite proof was brought forward to show that the land on the western side of the fault was originally higher than the land lying on the eastern side of the fault. Lack of appreciation of this fact was largely responsible for the drilling of the dry holes east of the fault.

Assisted now by the definite proof of underground development work it is possible to appreciate the weight to which surface evidence in these hills was entitled.

Along the fault itself, pits were dug that showed very fine sandy gray shale faulted against fine yellowish brown sandstone and gray sands and gravel. While all of this material was very fine, that east of the fault was distinctly finer. The results of screening tests were as follows:

Sample west of fault—On 100-mesh, 14.7 per cent; On 150-mesh, 57.5 per cent; Through 150-mesh, 27.8 per cent.

Sample east of fault—On 100-mesh, 11.6 per cent; On 150-mesh, 19.2 per cent; Through 150-mesh, 69.2 per cent.

On the surface the fault shows a dip to the west at an angle of 74 degrees, but underground the dip apparently is not so great.

One of the surface evidences of the existence of the fault is as follows:

The Moynier water well, drilled on the southeast corner of the property, went through the lowest Pleistocene conglomerate at 80 feet or 120 feet above sea level. The lowest outcrop of the thin capping of Pleistocene gravel on the escarpment east of the fault is at an elevation of 450 feet. This gives a difference of 330 feet in the elevation of the gravel at the two points. An ideal section is submitted showing this condition.

Underground development work in the field shows that the oil-bearing beds east of the fault were lifted up, but that there was a drag near the fault; so that the shallowest showings of oil occur in the second line of wells east of the fault on the Pacific Baldwin property, rather than in the first line of wells east of the fault. A cross section is submitted showing this condition.

First Wells on High Topography

It was only natural, with much of the western limb of the anticline taken away by erosion,—with the crest of the fold dropped by faulting and the eastern limb of the structure raised by the same faulting, so as to make the uplifted eastern limb of the structure the most prominent topographic feature in the hills,—that the early development work treated the hills as a single structural unit. This resulted in the early prospect wells being drilled on the high topography and east of the fault.

Another theory was that if the hills represented a great structural feature, it was possible that erosion might have taken away the north limb thereof. Pacific-Baldwin 1 was drilled with this thought in mind, but Pacific-Baldwin 2 was drilled in a somewhat similar position but for reasons involving the leasehold rights of the Lessee.

The general direction of the under-

(Continued on page 180.)

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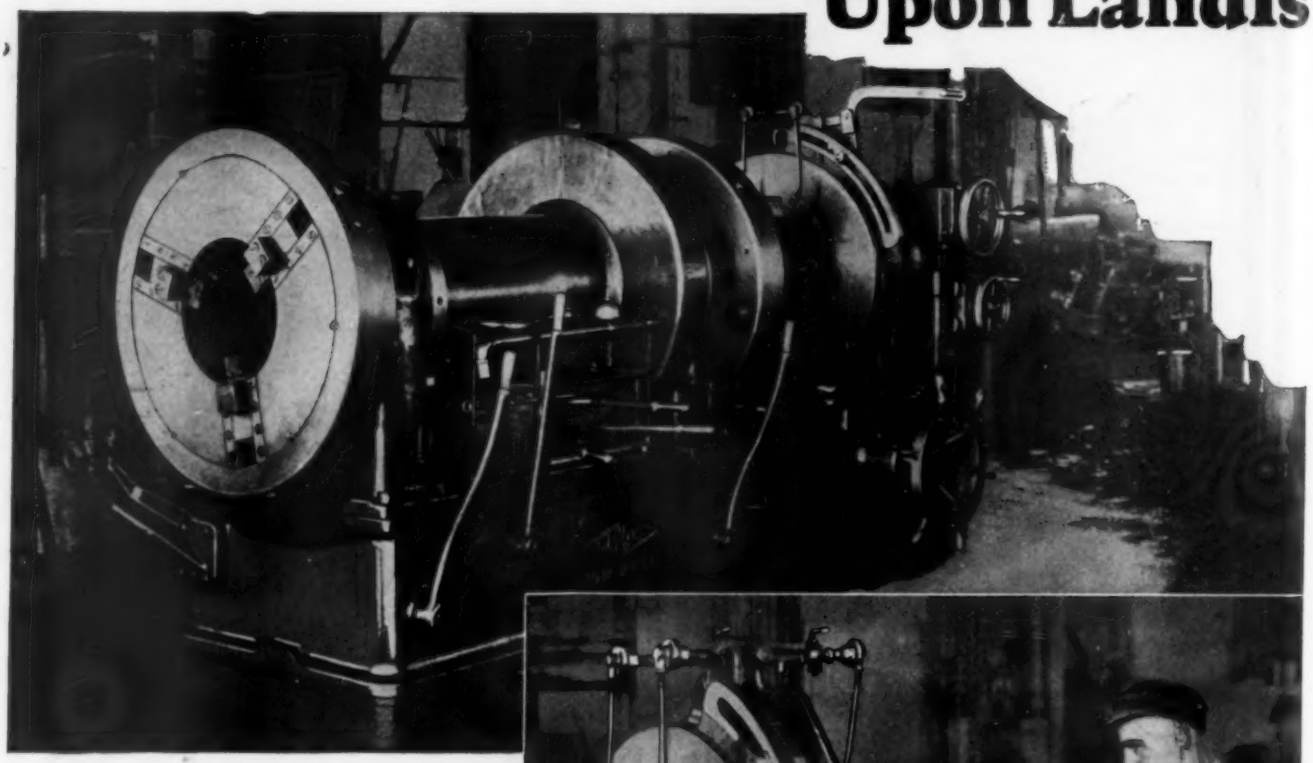

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Field Statistics Covering 1925

The following pages graphically tell the story of the producing branch of the Oil Industry during the past year. Here will be found figures and statistics answering every question on the economic condition of this part of the business. The tabulations and charts should prove of tremendous value at this time to executives and field men in outlining operating schedules for the coming months. As a permanent reference work this information cannot be equaled.

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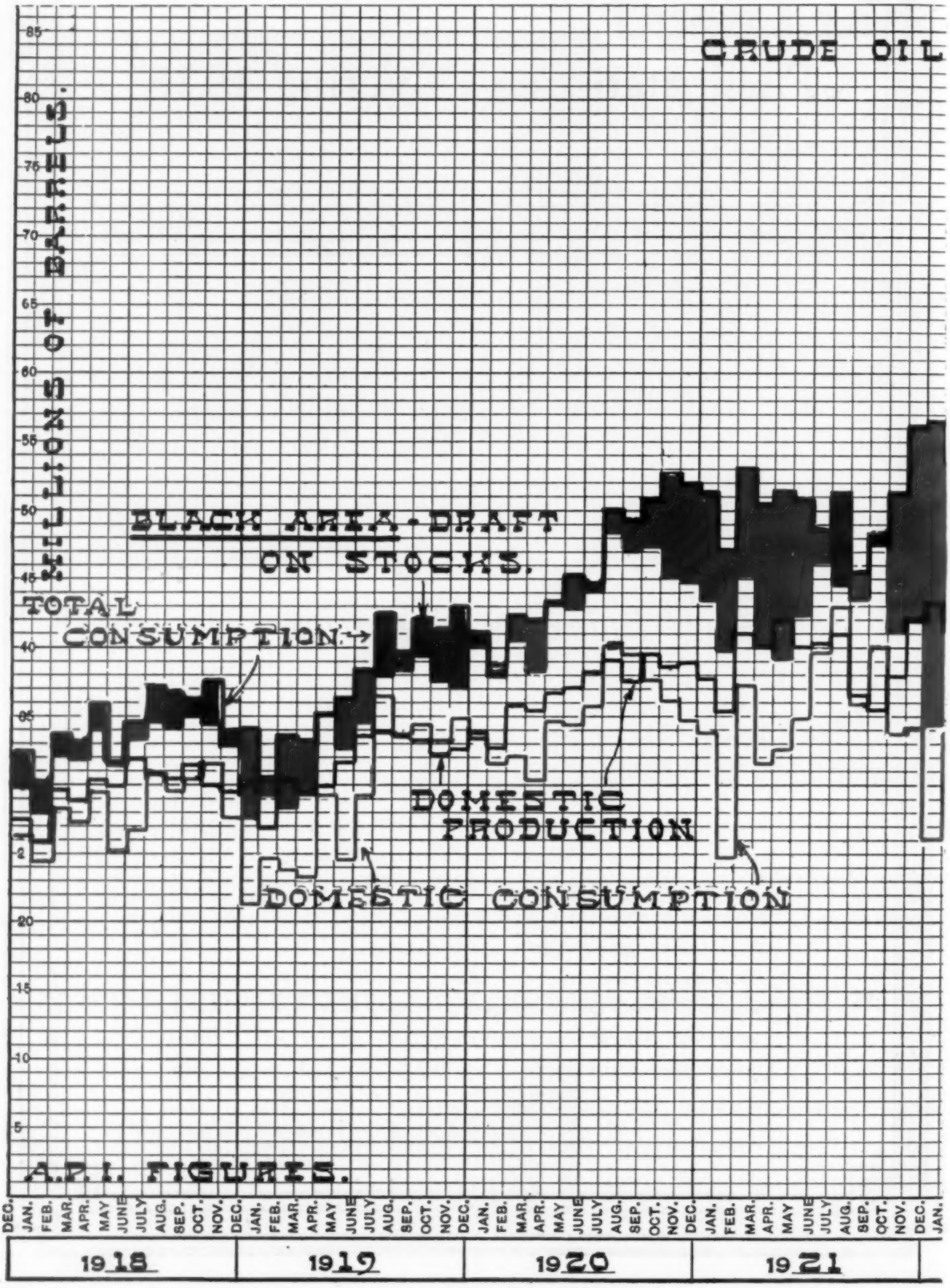
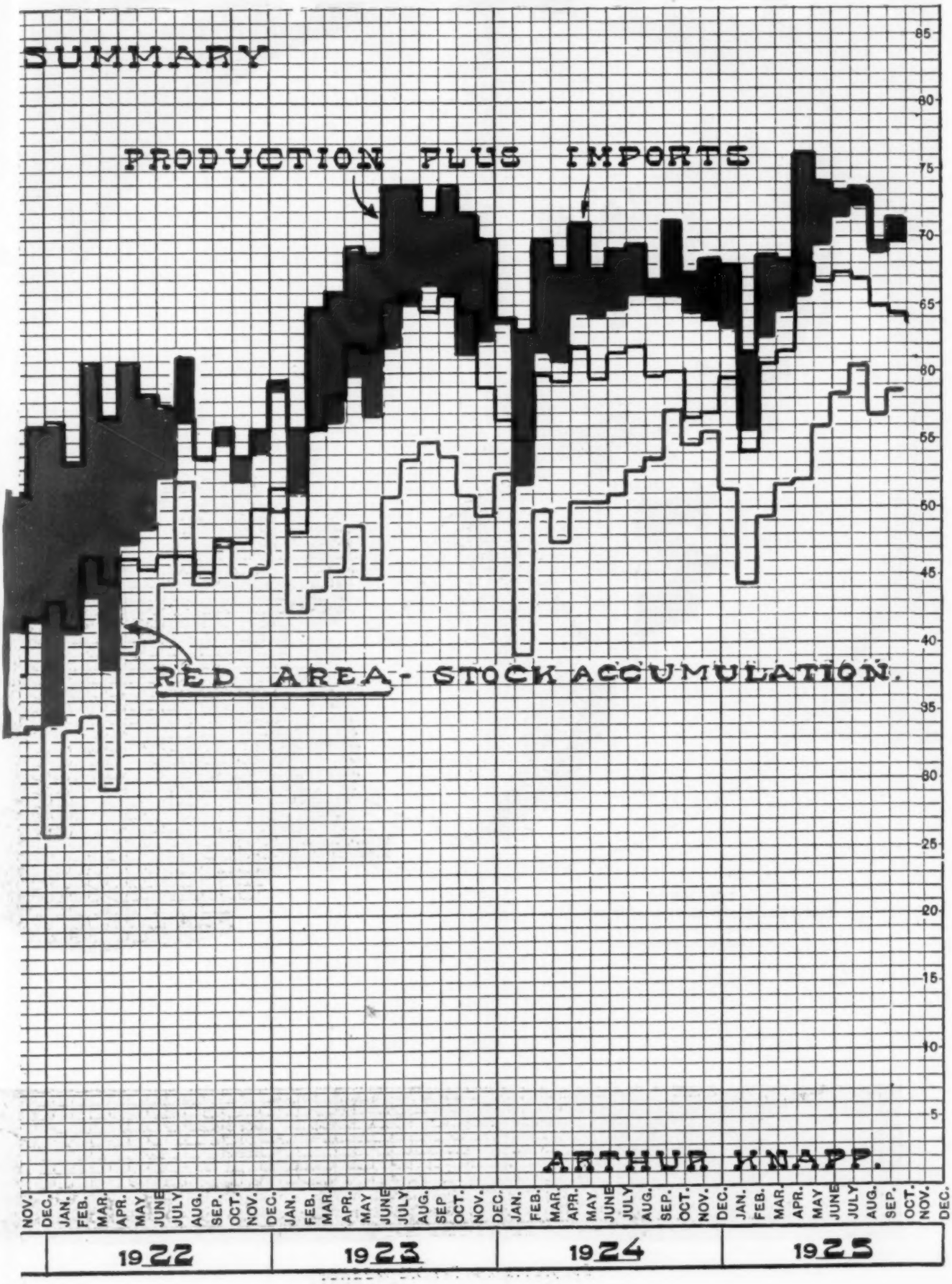
Summary of Crude Petroleum from 1918 to 1926



Summary of Crude Petroleum from 1918 to 1926



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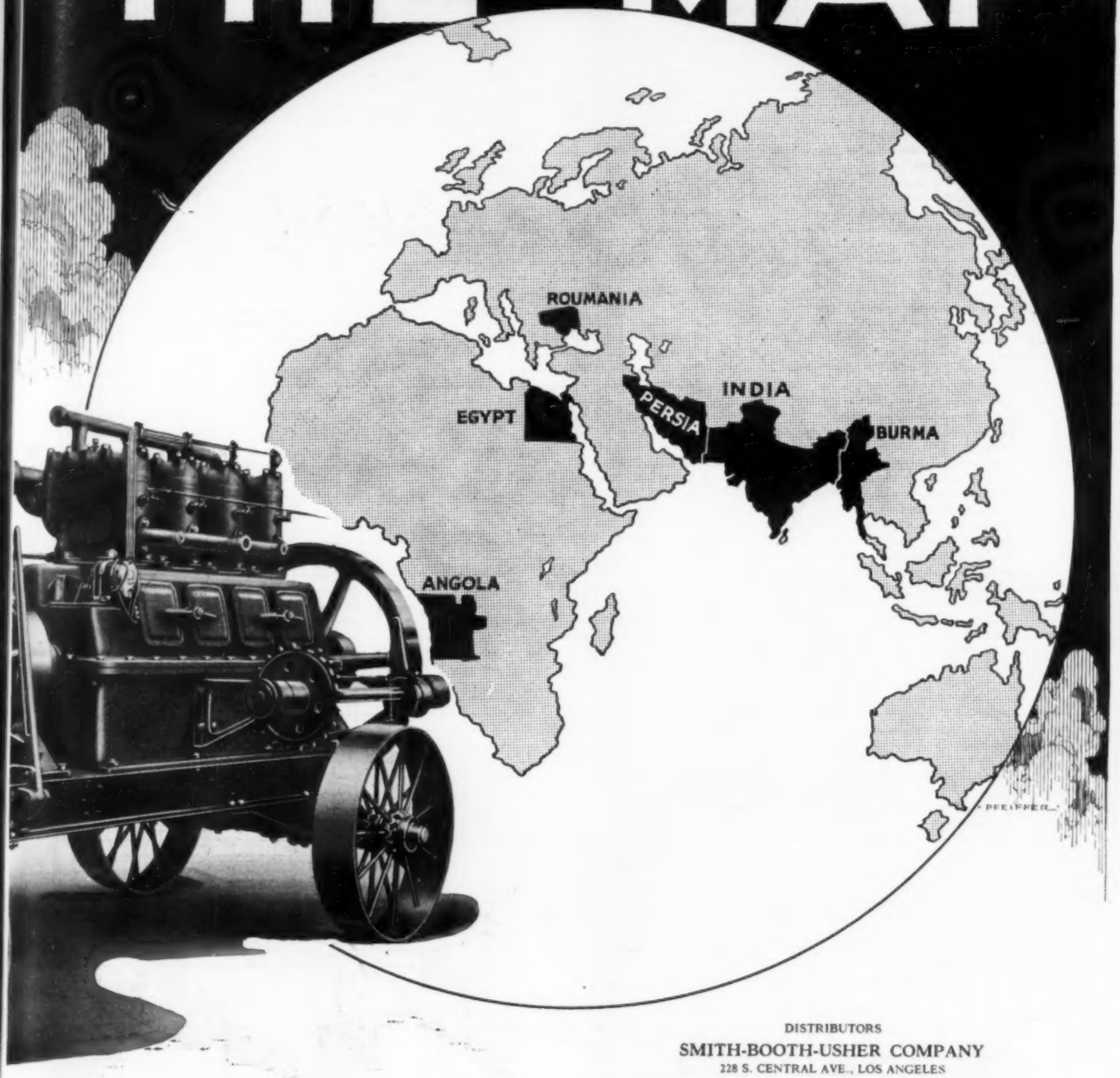

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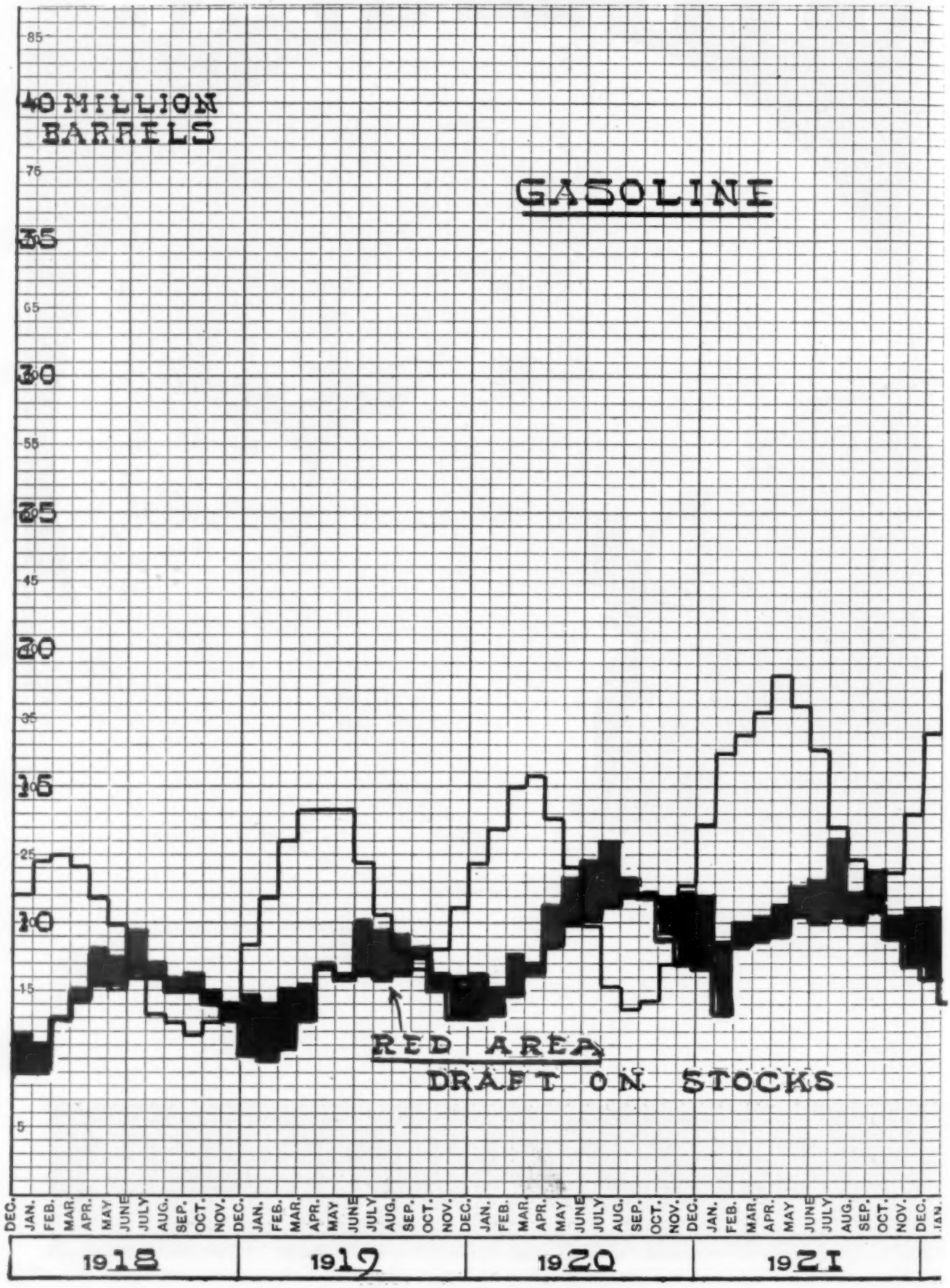
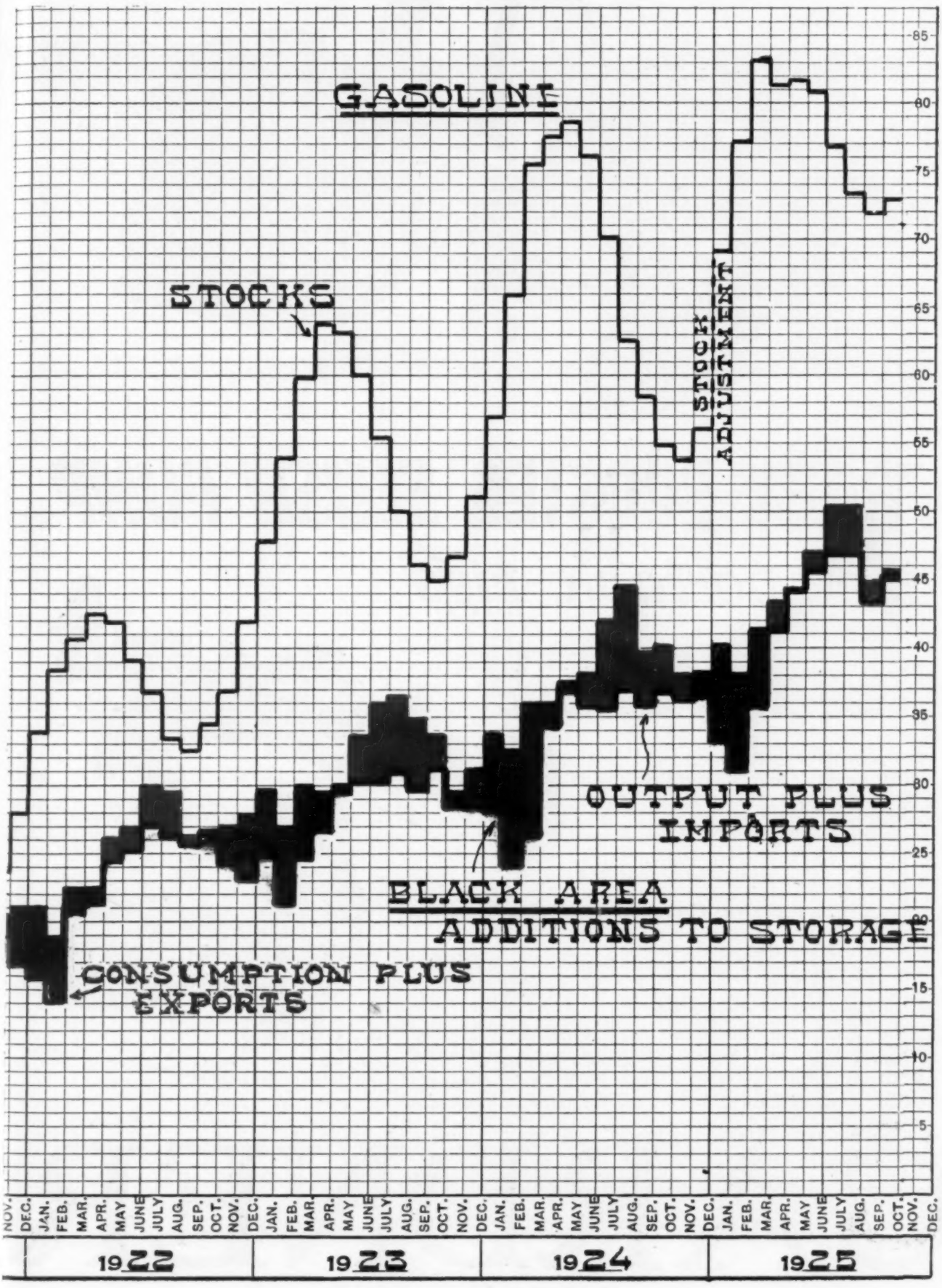
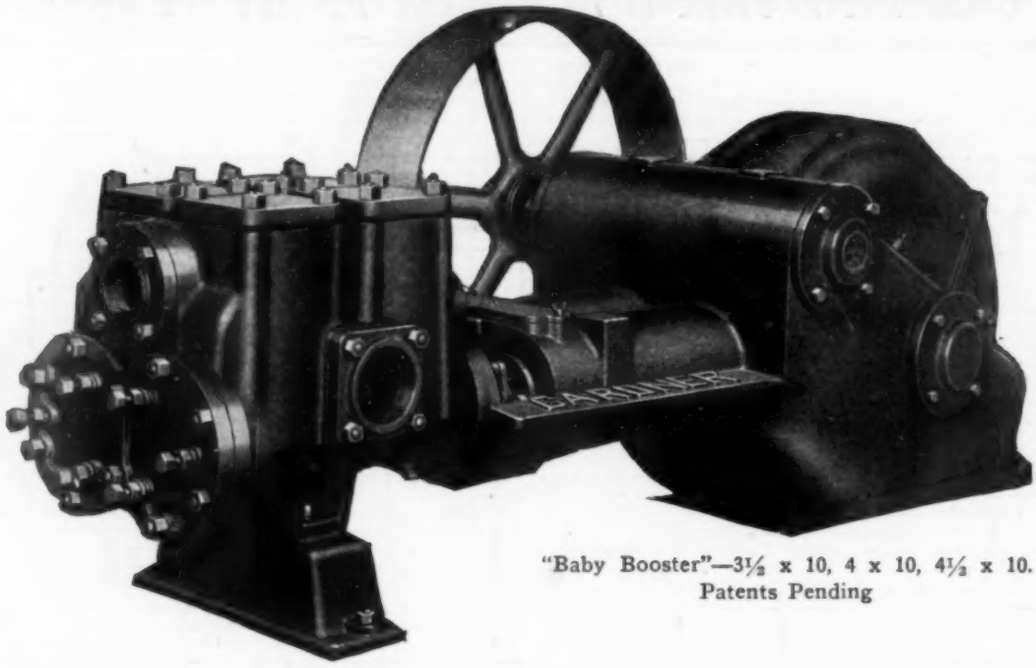


GASOLINE TREND FOR PAST EIGHT YEARS





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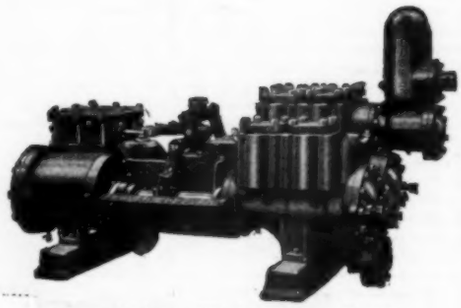

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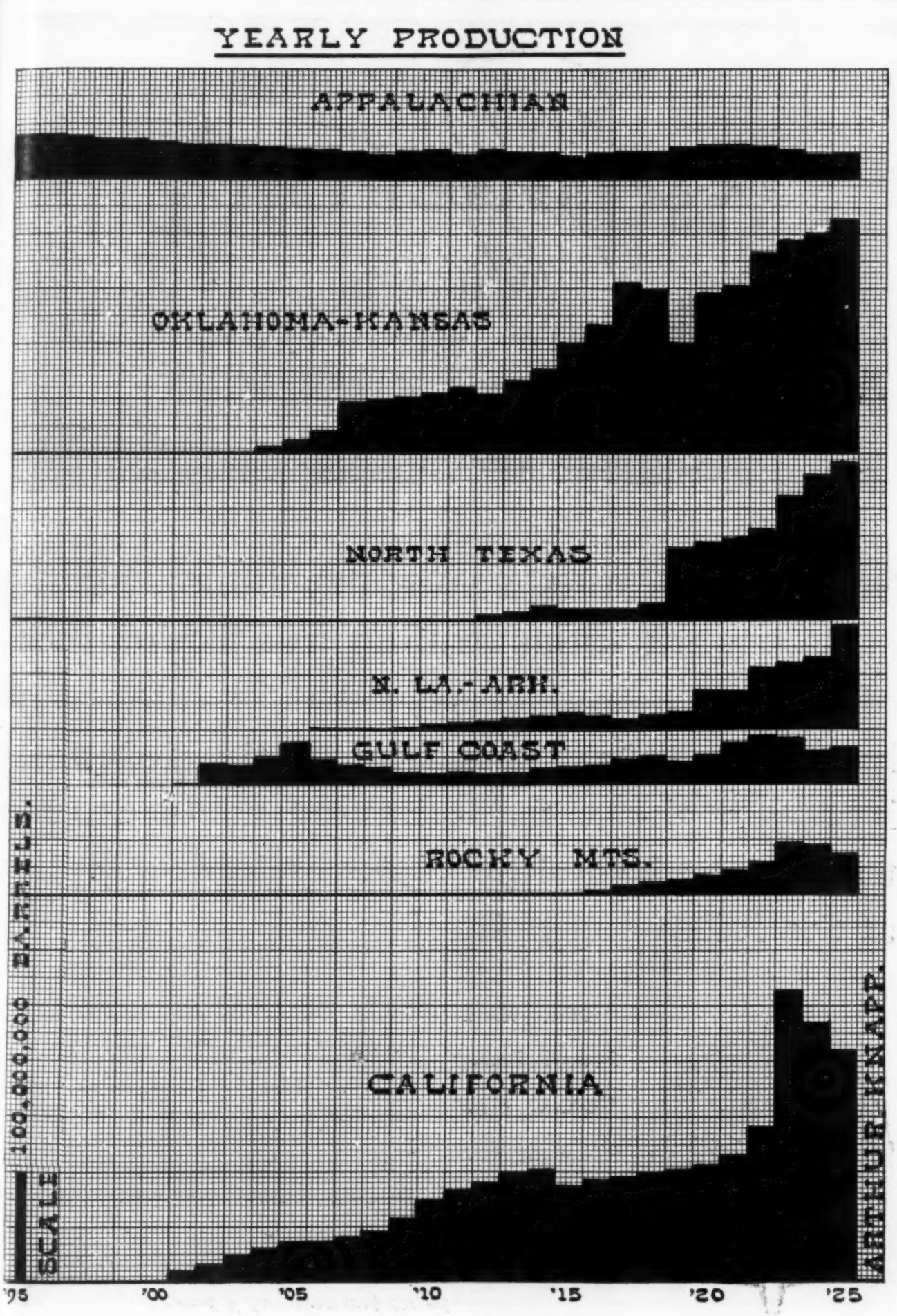
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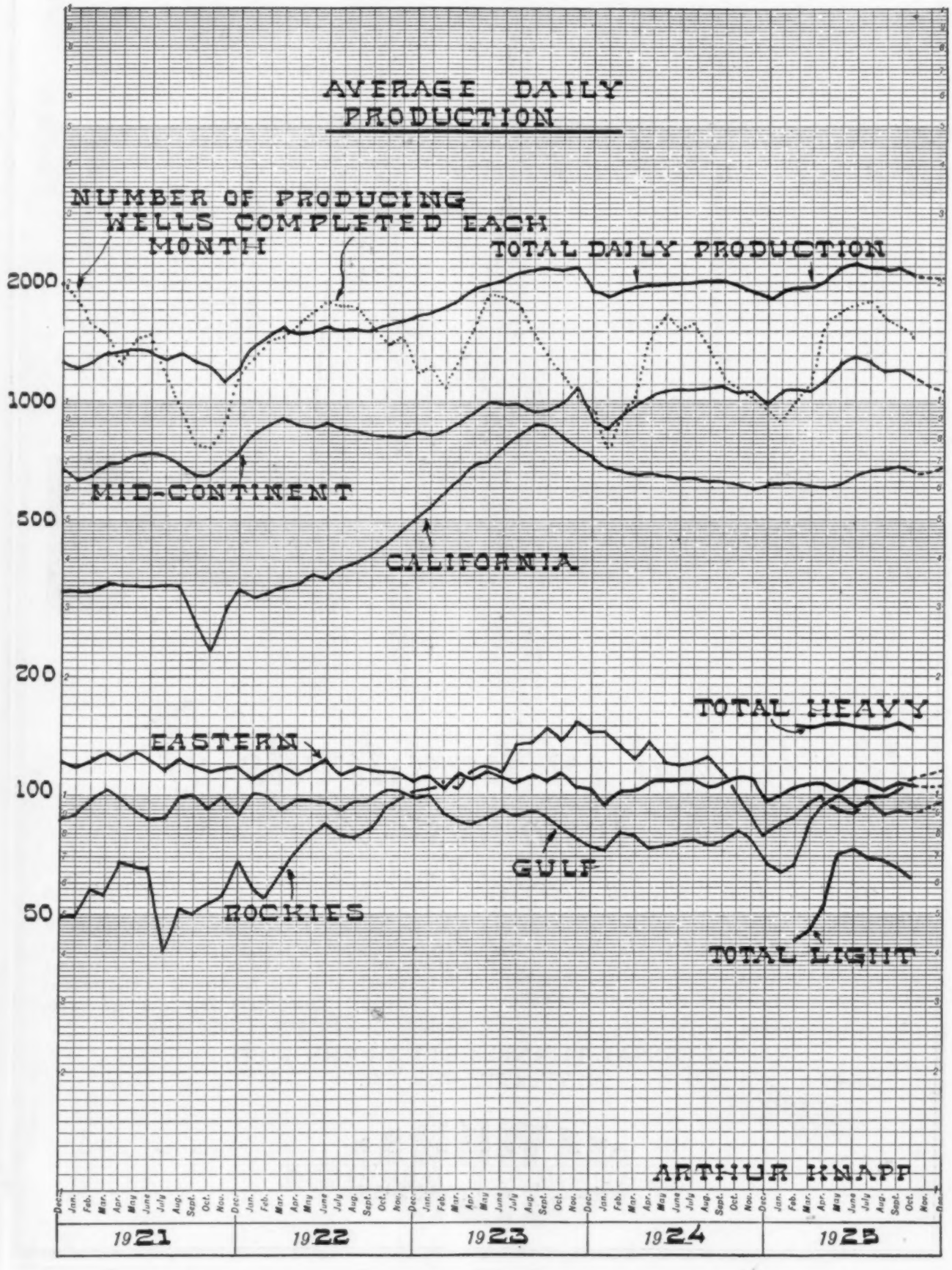
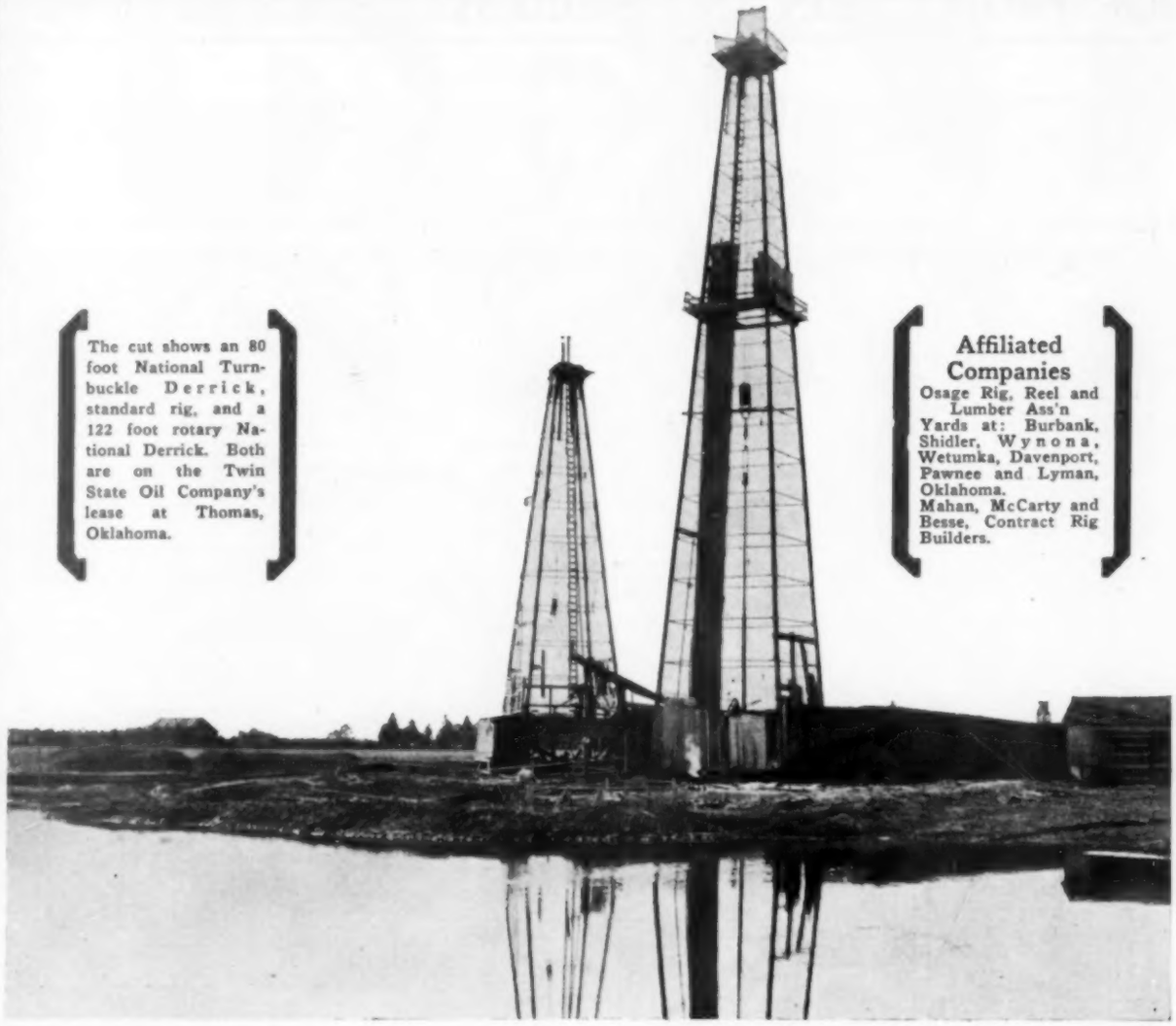
THE NATIONAL SUPPLY COMPANIES

Say you saw it in The OIL WEEKLY

U. S. PRODUCTION AND FIELD STATISTICS 1921 TO 1926





The cut shows an 80 foot National Turnbuckle Derrick, standard rig, and a 122 foot rotary National Derrick. Both are on the Twin State Oil Company's lease at Thomas, Oklahoma.

Affiliated Companies

Osage Rig, Reel and Lumber Ass'n Yards at: Burbank, Shidler, Wynona, Wetumka, Davenport, Pawnee and Lyman, Oklahoma.
Mahan, McCarty and Besse, Contract Rig Builders.

Reflected in hundreds of instances—

National Turnbuckle Derricks' Overwhelming Advantages

We matched wood with steel—and made a matchless derrick! Matchless in strength, for its strength is the strength of steel; matchless in resiliency, due to wood construction of yellow pine and hardwood!

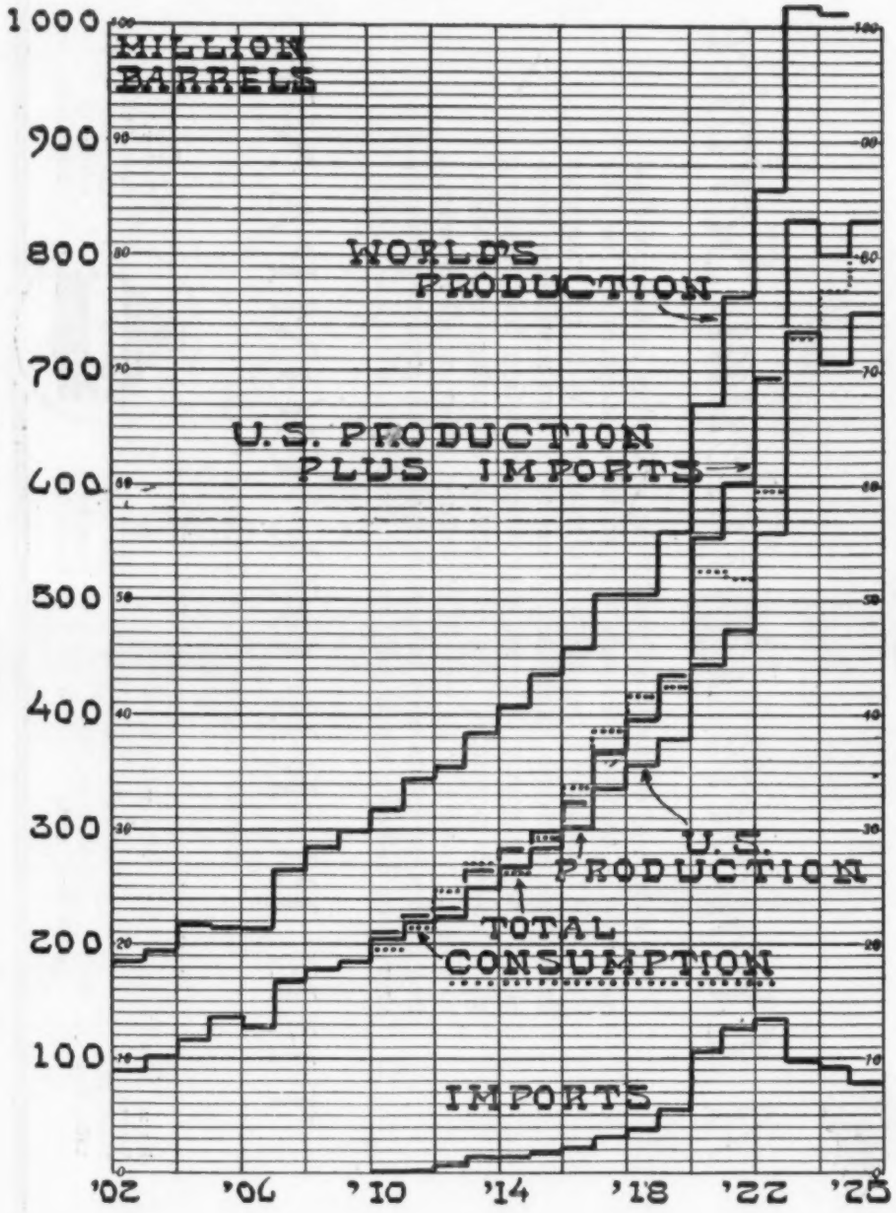
Add to its choice materials the fact that, in back of National design, lies the thought and experience of three of the oil country's foremost rig builders. The sum and total is the reason why National Turnbuckle Derricks are overwhelmingly the choice of their field.

NATIONAL TURNBUCKLE DERRICK CO.
413 Wright Bldg., Tulsa, Okla.

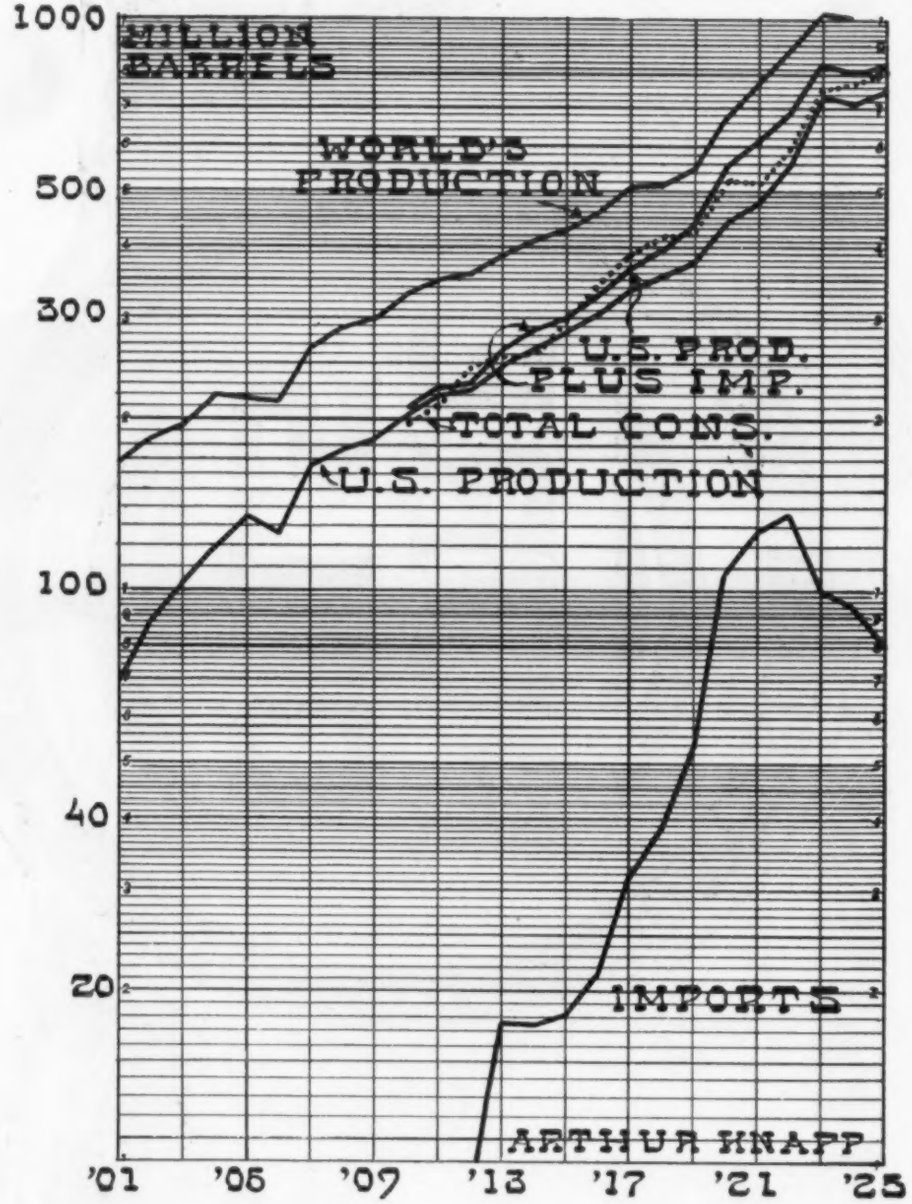
NATIONAL TURNBUCKLE DERRICKS

Say you saw it in The OIL WEEKLY

RELATIVE VOLUME.



RELATIVE INCREASE.



A Complete Petroleum Service

Six thousand oil wells on producing properties in the principal oil fields of this country are a formidable background for The Pure Oil Company's Service of Petroleum. With its own pipe lines, nine refineries, tank cars, steam ships and marketing properties, this company is in an exceptional position for supplying all petroleum products. An outstanding advantage is its ability to control quality from well to consumer. Having all its properties connected by its own telegraph system the company offers a service of delivery electrically responsive.

THE PURE OIL COMPANY

General Offices: COLUMBUS, OHIO

Refineries at:

Marcus Hook, Pa.
Warren, Pa.
Heath, Ohio
Cabin Creek Jct., W. Va.
Minneapolis, Minn.
Cushing, Okla.
Ardmore, Okla.
Muskogee, Okla.
Smith's Bluff, Texas

Branch Offices at:

Chicago
Dallas
New York
Minneapolis
Warren, Pa.
Pittsburgh
Tulsa, Okla.
Charleston, W. Va.
Atlanta, Ga.
Pensacola, Fla.

Why Not Use the Best?

"CROTTO" THREE JAW WIRE LINE DRILLING CLAMP

"SAVES TIME AND WIRE LINE"

BALL BEARING

HEAT TREATED LINERS WITH PROJECTED WORKING FACES

WELDLESS NON-FOULING LINKS

Price $95.00
f. o. b. Stores, Oklahoma, Kansas and Texas

Descriptive Folder Sent On Request

Sole Manufacturer

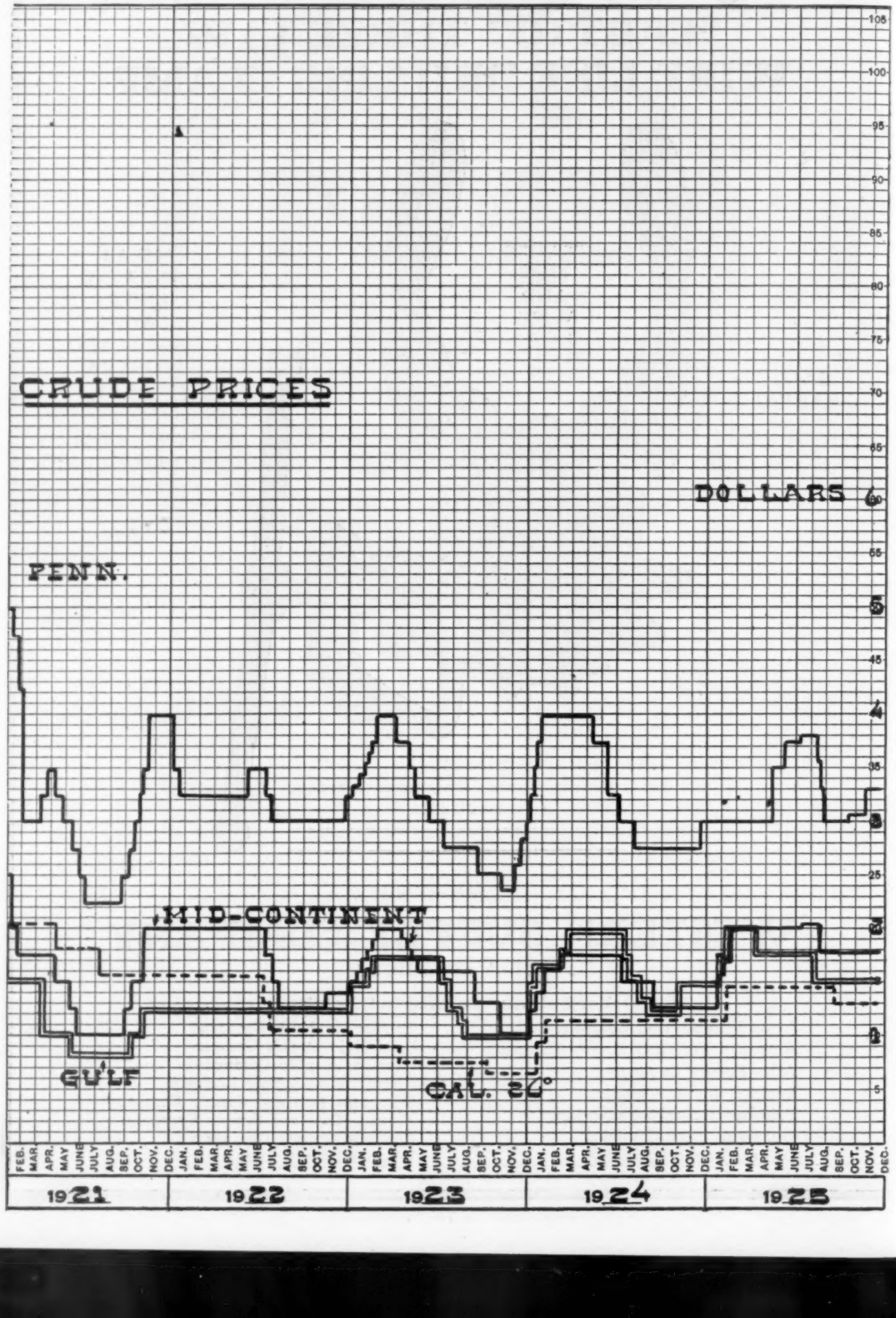
WESTERN SUPPLY COMPANY

TULSA, OKLAHOMA

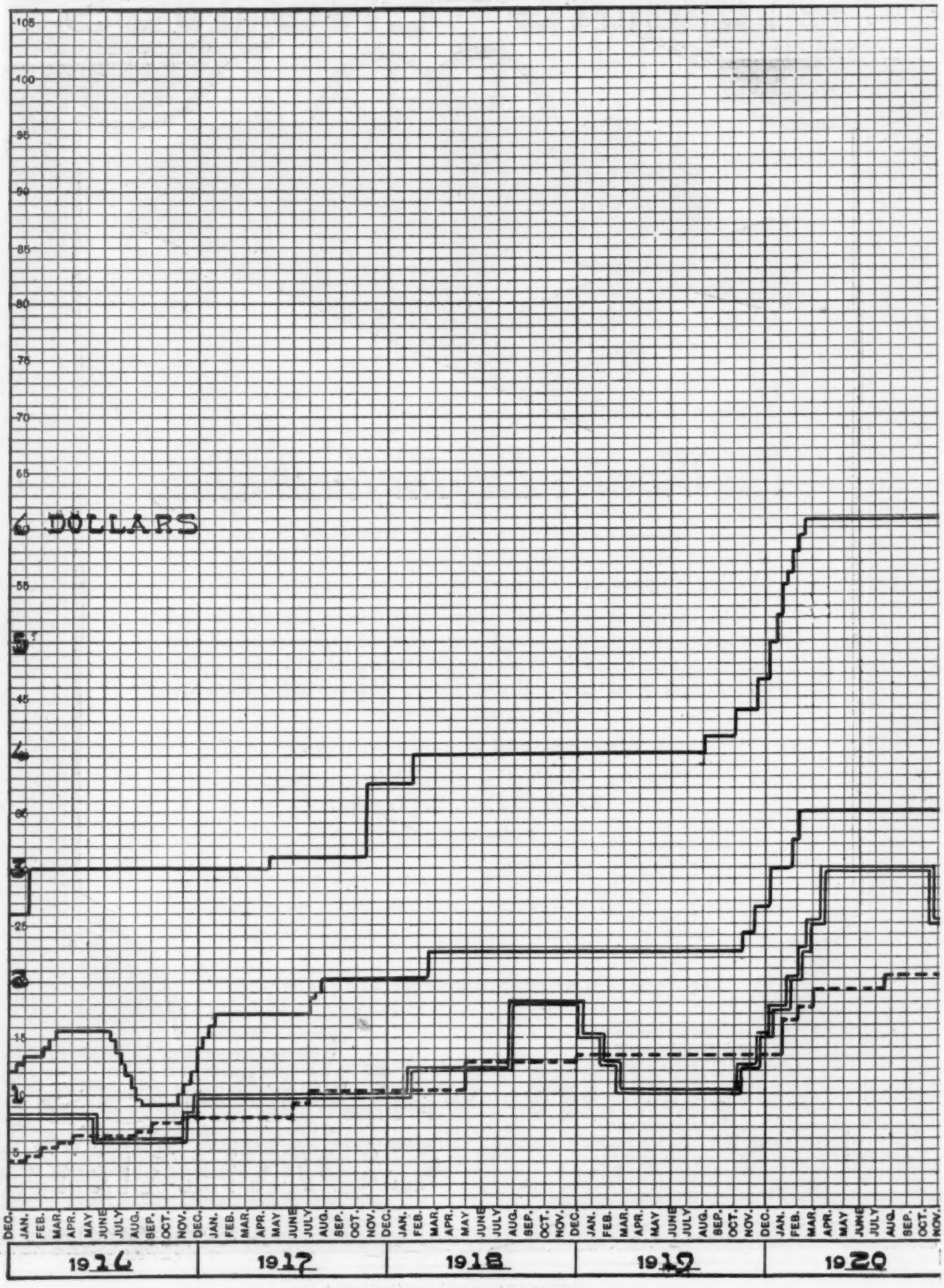
For Sale and Carried in Stock By

Acme Fishing Tool Company
American Tool and Supply Company
Atlas Supply Company
Bovaird Supply Company
Bridgeport Machine Company
Dunnigan Tool Company
Drillers Supply Company
Fairport Machine Company
Frick-Reid Supply Company
Hercules Supply Company
International Supply Company
Mountain Iron and Supply Company
Murray Tool and Supply Company
Republic Supply Company
Wagner Supply Company

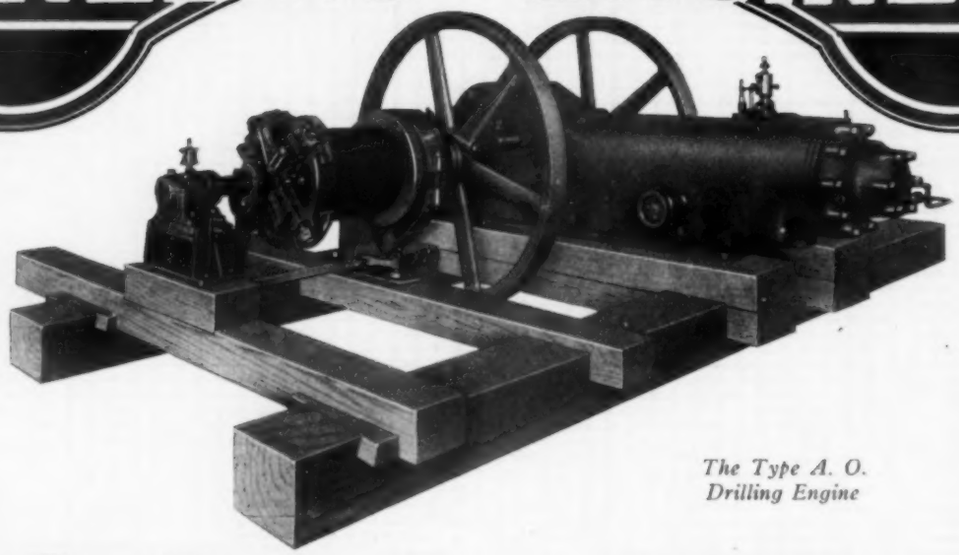
COMPARISON OF CRUDE PRICE STRUCTURE 1916-1926



COMPARISON OF CRUDE PRICE STRUCTURE 1916-1926



FRANKLIN VALVELESS DRILLING ENGINES-



The Type A. O. Drilling Engine

The Wonder Engine for Drilling

We have set a standard that only FRANKLIN can meet,—a standard of performance that placed Franklin Valveless Oil Drilling Engines in a class by themselves.

The saving in fuel and water, their power, endurance and ease of control quickly win the approval of experienced oil and gas men, and Franklin's low maintenance cost and adaptability to any fuel conditions will still further add to your satisfaction as a user.

May we send you one on trial?

Price for Mid-Continent and Western Service
$3700.00 F. O. B. Franklin.

Distributed by

ATLAS SUPPLY CO.
Muskogee, Okla., and Branches

NEW MARTINSVILLE SUPPLY CO.
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INTERNATIONAL SUPPLY CO.
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BRADFORD SALES CO.
Bradford, Penna.

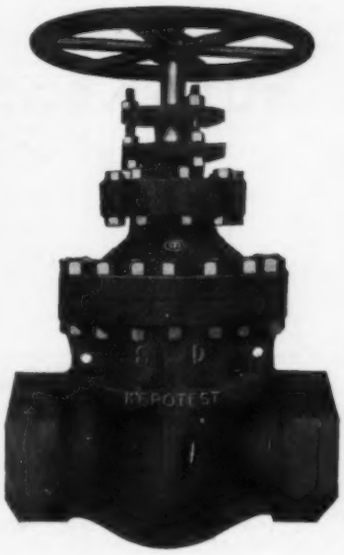
McEWEN BROTHERS
Bolivar, N. Y.

46 Years of Exclusive, Continuous Oil Field Service

FRANKLIN VALVELESS ENGINE COMPANY

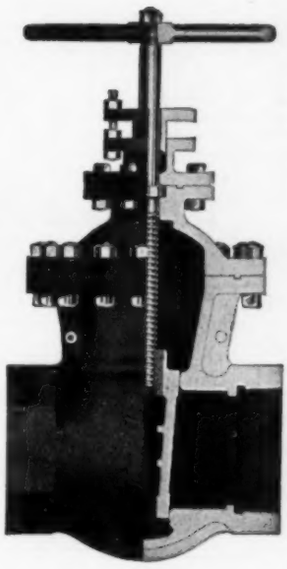
Established 1879

AN INVESTMENT IN SAFETY AND SATISFACTION



Safety is built into the very pores of the steel of the KEROTEST. The machining and assembling operations are carefully watched and checked on precision gauges during every step of construction. Kerosene,—because of its greater penetrability than water—under high pressure is used to search out even the tiniest flaw in the steel. In the valve body KEROTESTS have the distinct feature of receding seats, affording the greatest possible protection.

Leading oil field operators have adopted KEROTEST Valves and Fittings as part of their standard equipment. Let us show you why you too should be using this superior line of valves and fittings for your heavy duty service requirements.



VALVES KEROTEST **FITTINGS**

The World's Standard for High Pressure Service

Made By

Pittsburgh Reinforced Brazing & Machine Co.

Pittsburgh, Penna.

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GRINNELL COMPANY OF THE PACIFIC
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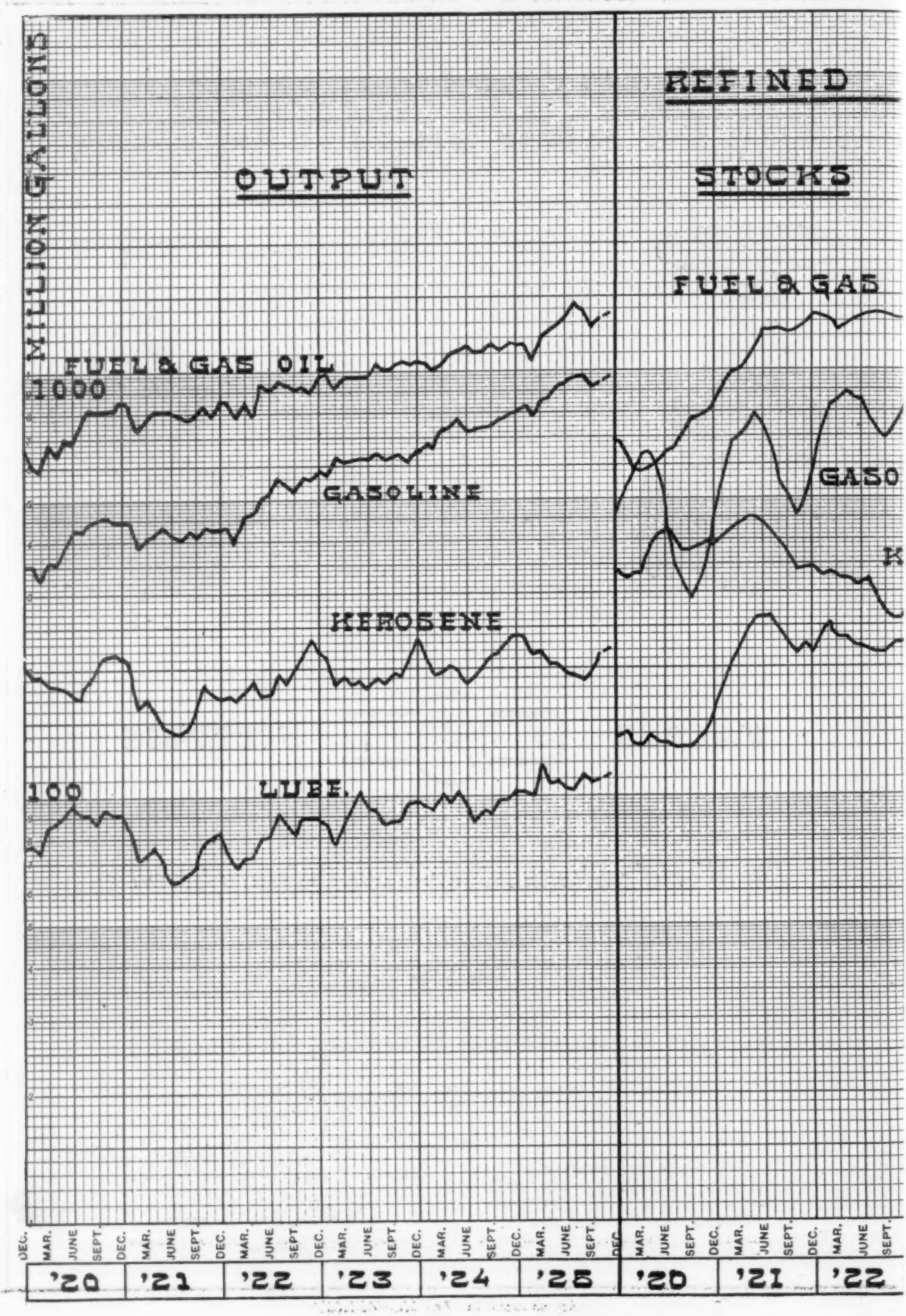
OIL WELL SUPPLY COMPANY
Pittsburgh New York Tampico London

Say you saw it in The OIL WEEKLY


MILLION GALLONS
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REFINED
STOCKS
FUEL & GAS OIL
1000
GASOLINE
KEROSENE
100
LUBE.
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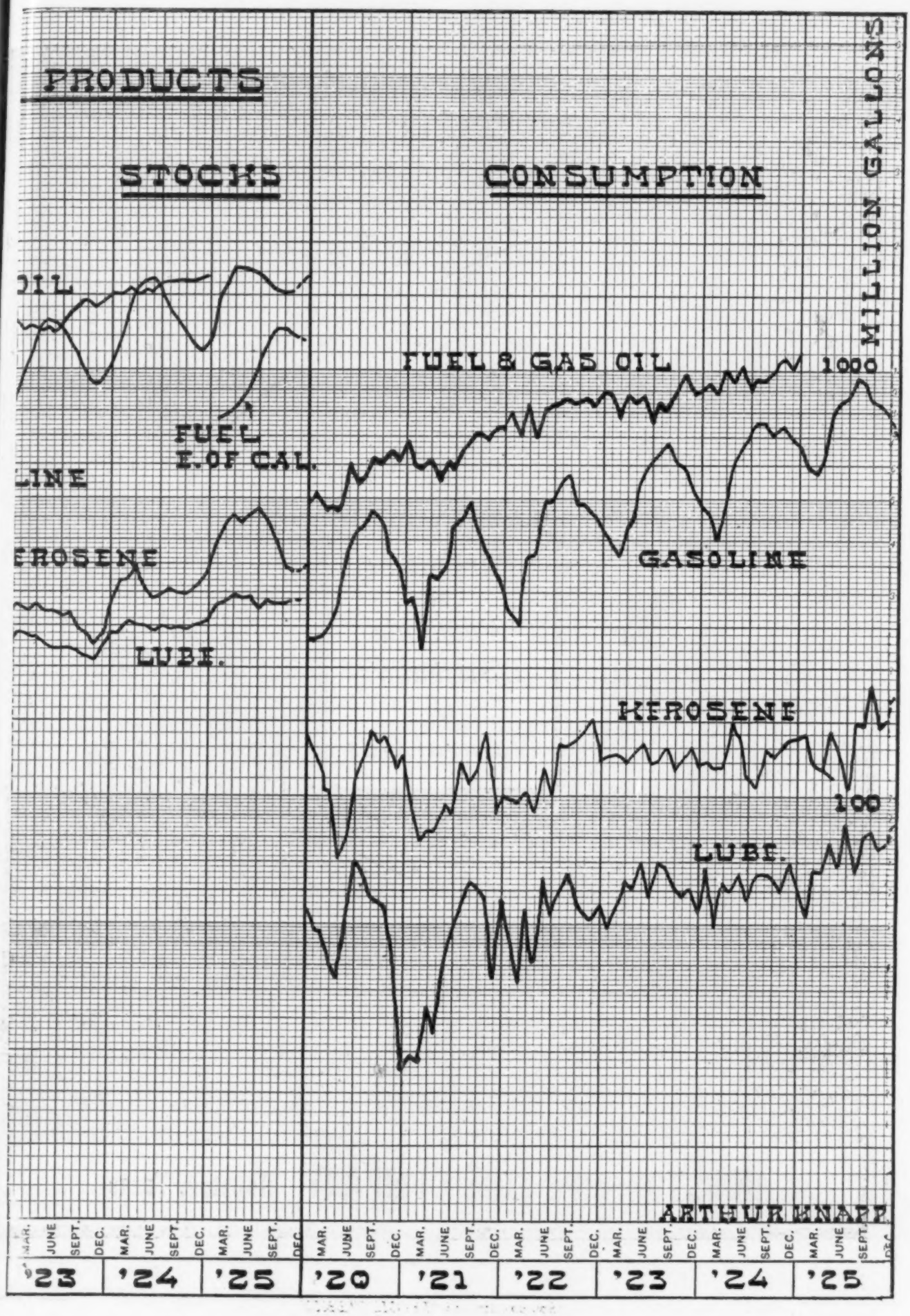
PRODUCTS
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MILLION GALLONS
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LUBE.
FUEL & GAS OIL
1000
GASOLINE
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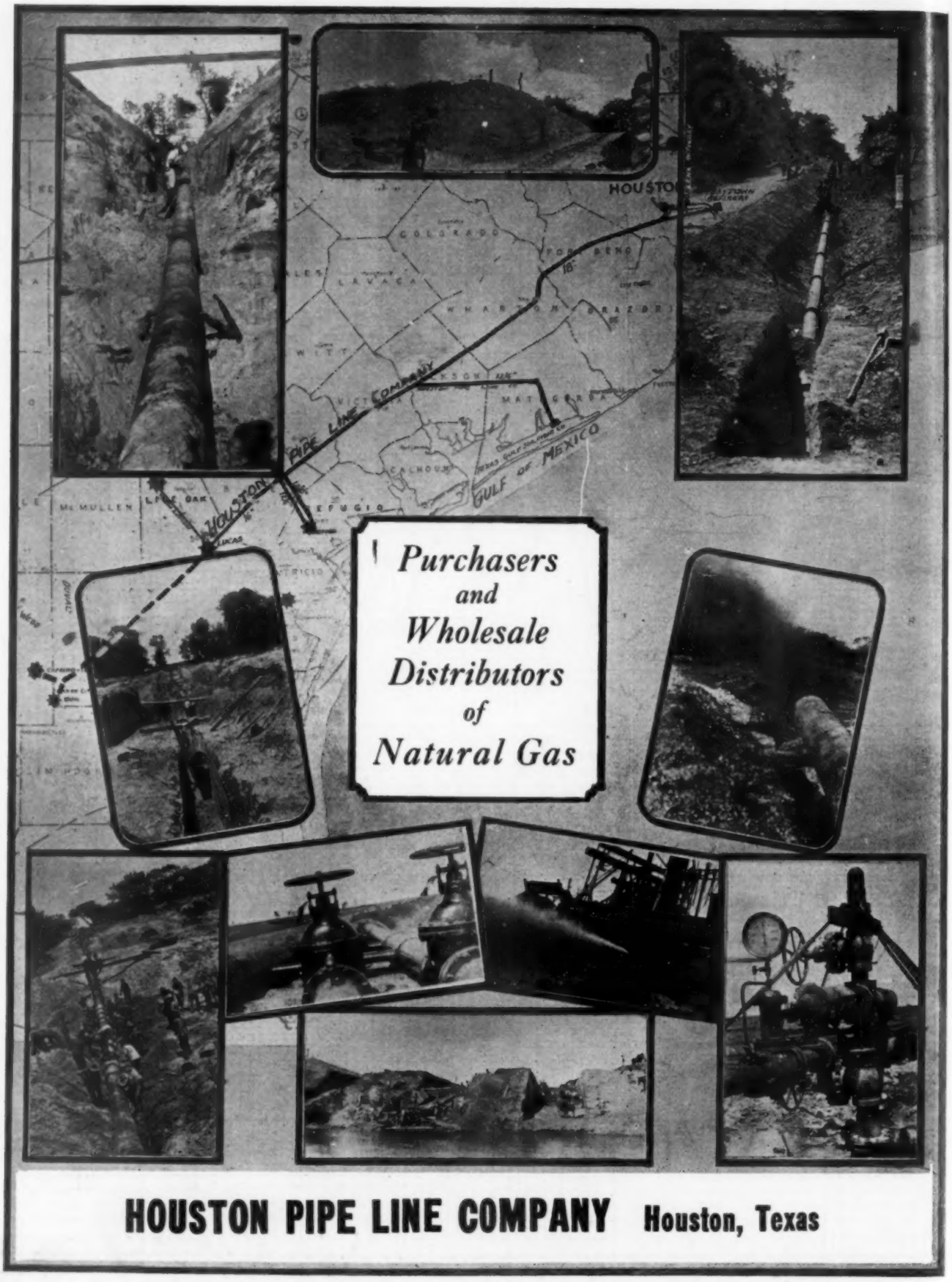
LUBE.
ARTHUR KNAPP
MAR. JUNE SEPT. DEC.
'23 '24 '25
'20 '21 '22 '23 '24 '25


HOUSTON
COLORADO
LAVACA
WHARTON
BRAZORIA
MATAGORDA
CALHOUN
McMULLEN
REFUGIO
HOUSTON PIPE LINE COMPANY
GULF OF MEXICO
Purchasers
and
Wholesale
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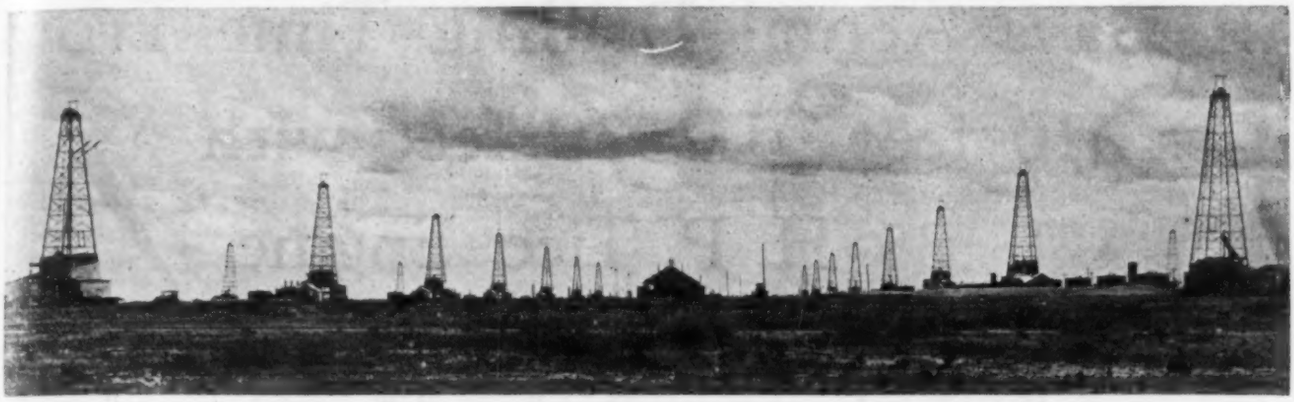
Natural Gas
HOUSTON PIPE LINE COMPANY Houston, Texas



A scene in the Big Lake oil field, showing the offset producers of the Texon and Big Lake companies with intervals of 500 feet between the wells

tinues, as buying will be on a more competitive basis.

Intensive leasing in West Texas has been under way almost continuously since the Big Lake field proved itself of the major type, and the majority of the large producers in the Mid-Continent district have given liberal appropriations for the purchase of leases in the western part of the state. The Big Lake field had a poor beginning by reason of the discovery well being located on the west edge of the main structure, and opportunities to get in were made to leading Mid-Continent producers by the discoverers before a deal was consummated with Pittsburgh parties who organized the Big Lake Oil Company. This deal resulted in all close in acreage being taken off the market. Having overlooked this bet, the major companies have been alert for another opportunity, and rushed in with big lease price offers when oil was later uncovered in Crockett and Upton Counties.

Rush in Crockett

The discovery of oil on the L. P. Powell ranch in Crockett County last May by the World Company found the companies eager to buy, and it is estimated that about $5,000,000 was paid in oil and cash considerations by oil companies around this well, which flowed 30 barrels 32 gravity oil daily at its best. Royalty purchases helped to make this record price figure. The discovery well and leases were sold to Humble and Marland Oil Company on June 10 for $1,400,000 of which $350,000 was paid in cash. Humble and Marland have since completed a second well, located 1000 feet due west of the discovery well, with an initial flow of 20 barrels in the same pay horizon. Both wells are now flowing at a combined rate of 35 barrels daily.

The oil strike made by Johnson & McCamey on the Hurdle structure in Upton County with an initial production of 190 barrels flush when pumped from sandy-lime at 2175-93 feet was also played heavy by major companies in buying protection. The discovery well and 730 acres of leases were sold to the Republic Production Company for $500,000, part cash and the balance in notes. The three-quarter interest in the well and 320 acres discovery lease held by Marland was not obtained by Republic in the purchase. Johnson & McCamey are reputed to have realized a gross of $700,000 on this single wildcat venture, while the acreage was donated by Dixie Oil Company and Marland. The well has since pumped off and is being deepened by Republic.

and Butler played a major role in this oil drama as Butler Bolted Tanks were used and are still being used in storing the oil.

Here's a good reason why they are used: They are gas tight. Note the method of hole punching and larger sheets.

There is no chance for error where giant punching machines make all holes. Each hole is where it should be. Each hole meets its counterpart. Exact erection is assured.

Larger sheets reduce the chance for leaks. There are fewer seams! Quicker erection is also assured.

These reliable dealers erect Butler Bolted Tanks and are ready to give you speedy service:

M & V Tank Co., at Wichita Falls, Vernon and Olney, Texas.

Drane-Humphrey Co., at San Angelo and Big Lake, Texas, and Carlsbad, N. M.

Drane Tank Co., at Tulsa, Holdenville and Braman, Oklahoma, and Winfield, Kansas.

M. A. Trimmer, at Blackwell, Okla.

Wilson Tank & Culvert Co., at San Antonio, Texas.

Los Angeles Mfg. Co., Los Angeles, California.

Continental Supply Co., at Kevin, Montana.

G. J. Gillespie, 32 Fenchurch St., London, E. C. 3, England.

TRADE STEEL BUTLER PRODUCTS MARK

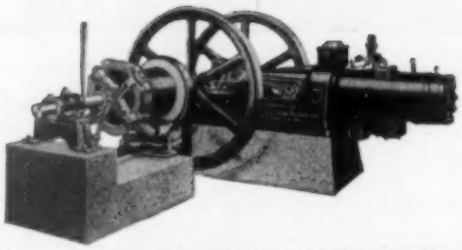
Butler Manufacturing Co.

Kansas City, Mo. **Minneapolis, Minn.**

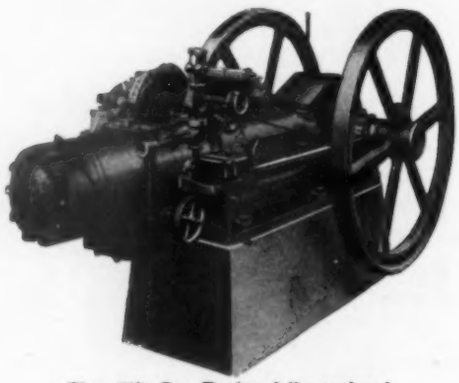
Butler Products include: *Ready-Made* Steel Buildings, Cans, Funnels, Buckets, Measuring Pumps, Truck Tanks, Underground Tanks, Storage Tanks, Etc. Any kind of welded tank made to your specifications.

The volume of drilling equipment needed in carrying on the development of the Big Lake field requires well stock warehouses. The warehouse of the Texon Oil and Land Company

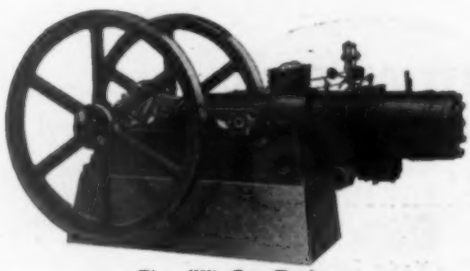
21 Days Actual Drilling Time From 220 feet to 2530 feet with a 35 H. P. Tico Engine!



Tico "2" Gas Engine equipped with Titusville Reversible Clutch



Tico "2" Gas Engine fully enclosed



Tico "2" Gas Engine

The following drilling report on a well completed on a prominent Kansas lease is indicative of the performance of the Tico Gas Engines in every field:

"Well changed over from steam to gas engine on September 28th at noon at a depth of 220 feet. Well topped the sand at 2530 feet on October 22nd at noon—making a total number of twenty-four and a half days drilling time; less a total of two days and a half shut down time due to insufficient gas. Actual drilling time from 220 feet to 2530 feet, twenty-two days. Forty feet of bad hole was encountered which had to be filled up and redrilled, which required three days' time. Allowing two days for the 220 feet spudded before TICO GAS ENGINE was installed, would make a total of 21 days drilling time on the well from top to bottom, or the depth of 2530 feet."

Ask any Continental man for further particulars. He will tell you this operator saved over $1800.00.

The TITUSVILLE IRON WORKS Co.

TITUSVILLE - PENNA.

Titusville Acme Boilers
Single and Twin Steam Drilling Engines
Tico Gas Engines
Band Wheel and Geared Powers

SOLE DISTRIBUTORS

The CONTINENTAL SUPPLY COMPANY

For THE CONTINENTAL
No. 2 RECTOR STREET

Export WELL SUPPLY CO.,
NEW YORK CITY, N. Y.

Titusville Acme Rotaries
Acme Swivels and Speed Draw Works
High Pressure Boilers
Crown Blocks
Slush Pumps

RUGGED - ENDURING

Say you saw it in The OIL WEEKLY

World's Production of Crude Petroleum Since 1857, by Years and Countries, in Barrels of 42 Gallons

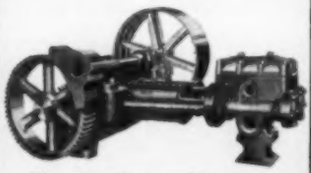
Year	Russia	United States	Italy	Canada	Russia	Galicia	Japan and Formosa	Germany	India	Dutch East Indies	Peru	Mexico	Argentina	Trinidad	Egypt	Other Countries	Total	Year	Pct. Prod. by U. S.
1857	1,977	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,977	1857	.00
1858	3,560	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,560	1858	.00
1859	4,349	2,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,349	1859	31.5
1860	8,542	500,000	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	508,578	1860	98.3
1861	17,279	2,113,609	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,130,917	1861	99.1
1862	23,198	3,056,650	29	11,775	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,091,692	1862	98.8
1863	27,943	2,611,309	58	82,814	40,816	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,762,940	1863	94.5
1864	33,013	2,116,109	72	90,000	64,686	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,303,780	1864	90.5
1865	39,017	2,497,700	2,265	110,000	66,542	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,715,524	1865	91.9
1866	42,534	3,597,700	992	125,000	83,052	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,899,278	1866	92.3
1867	50,838	3,347,300	791	190,000	119,917	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,708,846	1867	90.2
1868	55,369	3,646,117	367	200,000	88,127	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,990,180	1868	91.2
1869	58,533	4,215,000	144	220,000	202,308	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,695,985	1869	89.9
1870	83,765	5,260,745	86	250,000	204,618	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,799,214	1870	90.7
1871	90,030	5,205,234	273	269,397	165,129	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,730,063	1871	90.8
1872	91,251	6,293,194	331	308,100	184,391	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,877,267	1872	91.5
1873	104,036	9,893,786	467	365,052	474,379	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,837,720	1873	91.3
1874	103,177	10,926,945	604	168,807	583,751	.....	149,837	.....	.....	.....	.....	.....	.....	.....	.....	.....	11,933,121	1874	91.5
1875	108,569	8,787,514	813	220,000	697,364	158,522	4,566	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,977,348	1875	88.1
1876	111,314	9,132,669	2,891	312,000	1,320,528	164,157	7,708	29,219	.....	.....	.....	.....	.....	.....	.....	.....	11,051,267	1876	82.6
1877	108,569	13,350,363	2,934	312,000	1,800,720	169,792	9,560	58,025	.....	.....	.....	.....	.....	.....	.....	.....	15,753,938	1877	85.4
1878	109,300	15,396,868	4,329	312,000	2,400,960	175,420	17,884	26,708	.....	.....	.....	.....	.....	.....	.....	.....	18,416,761	1878	84.7
1879	110,007	19,914,146	2,891	575,000	2,761,104	214,800	23,457	26,161	.....	.....	.....	.....	.....	.....	.....	.....	23,601,405	1879	84.3
1880	114,321	26,286,323	2,035	350,000	3,091,200	229,120	25,497	41,360	.....	.....	.....	.....	.....	.....	.....	.....	30,017,606	1880	87.6
1881	111,314	9,132,669	2,891	312,000	1,320,528	164,157	7,708	29,219	.....	.....	.....	.....	.....	.....	.....	.....	11,051,267	1876	82.6
1882	136,610	30,349,897	1,316	275,000	4,537,815	330,076	115,549	58,025	.....	.....	.....	.....	.....	.....	.....	.....	35,704,288	1882	85.0
1883	139,486	23,449,633	1,618	250,000	6,002,401	365,160	210,423	26,708	.....	.....	.....	.....	.....	.....	.....	.....	30,255,479	1883	77.5
1884	210,667	24,218,438	2,855	250,000	10,804,577	408,120	297,923	46,161	.....	.....	.....	.....	.....	.....	.....	.....	35,968,741	1884	67.3
1885	193,411	21,858,785	1,941	250,000	13,924,596	465,400	29,237	41,360	.....	.....	.....	.....	.....	.....	.....	.....	36,764,730	1885	59.4
1886	168,606	28,064,841	1,575	584,061	18,006,407	305,884	37,916	73,864	.....	.....	.....	.....	.....	.....	.....	.....	47,243,154	1886	59.4
1887	181,907	28,283,483	1,496	525,655	18,367,781	343,832	28,645	74,284	.....	.....	.....	.....	.....	.....	.....	.....	47,807,083	1887	59.2
1888	218,576	27,612,025	1,251	695,203	23,048,787	466,537	37,436	84,782	.....	.....	.....	.....	.....	.....	.....	.....	52,164,597	1888	52.9
1889	297,666	35,163,513	1,273	704,690	24,609,407	515,268	52,811	68,217	94,250	.....	.....	.....	.....	.....	.....	.....	61,507,095	1889	57.2
1890	383,227	45,823,572	2,998	795,030	28,691,218	659,012	51,420	108,296	118,065	.....	.....	.....	.....	.....	.....	.....	76,632,838	1890	59.9
1891	488,201	54,292,655	8,305	755,298	34,573,181	630,230	52,917	108,929	190,131	.....	.....	.....	.....	.....	.....	.....	91,100,347	1891	59.6
1892	593,175	50,514,657	18,321	779,753	35,774,504	646,220	68,901	101,404	242,284	.....	.....	.....	.....	.....	.....	.....	88,739,219	1892	56.9
1893	535,655	48,431,066	19,069	798,406	40,456,519	692,669	106,384	99,390	298,969	600,000	.....	.....	.....	.....	.....	.....	92,038,127	1893	52.6
1894	507,255	49,344,516	20,552	829,104	36,375,428	949,146	171,744	122,564	327,218	688,170	.....	.....	.....	.....	.....	.....	89,335,697	1894	55.2
1895	575,200	52,892,276	25,843	726,138	46,140,174	1,452,999	141,310	121,277	371,536	1,215,757	.....	.....	.....	.....	.....	.....	103,662,510	1895	51.0
1896	543,348	60,960,361	18,149	726,822	47,220,633	2,443,080	197,082	145,061	420,979	1,427,132	47,536	.....	.....	.....	.....	.....	114,159,183	1896	53.4
1897	570,886	60,475,516	13,892	709,857	54,399,568	2,226,368	218,559	165,745	545,704	2,551,649	70,831	.....	.....	.....	.....	.....	121,948,575	1897	49.5
1898	776,238	55,364,233	14,489	738,391	61,609,357	2,376,108	265,389	183,427	542,110	2,964,035	70,905	.....	.....	.....	.....	.....	124,924,682	1898	44.4
1899	1,425,777	57,070,850	16,121	808,570	63,934,968	2,313,047	536,079	192,232	940,971	3,795,961	89,166	.....	.....	.....	.....	.....	131,123,742	1899	43.5
1900	1,628,535	63,620,529	12,102	913,498	75,779,417	2,346,505	866,814	358,297	1,078,264	2,253,555	274,800	.....	.....	.....	.....	.....	149,132,116	1900	42.5
1901	1,678,320	69,389,194	16,150	756,679	85,168,556	3,251,544	1,110,790	313,630	1,430,716	4,013,710	274,800	10,345	.....	.....	.....	20,000	167,434,434	1901	41.4
1902	2,059,935	88,766,916	18,933	530,624	80,540,044	4,142,159	1,193,038	353,674	2,430,465	286,725	40,200	.....	.....	.....	.....	26,000	182,006,078	1902	48.8
1903	2,763,117	100,461,337	17,876	486,637	75,591,256	5,234,475	1,209,371	445,818	2,510,259	5,770,056	278,092	75,375	.....	.....	.....	36,000	194,879,669	1903	51.5
1904	3,599,026	117,080,960	25,476	552,575	78,536,655	5,947,383	1,419,473	637,431	3,385,468	6,508,485	345,834	125,625	.....	.....	.....	40,000	218,204,391	1904	53.7
1905	4,420,987	134,717,580	44,027	634,095	54,960,270	5,765,317	1,472,804	560,963	4,137,098	7,849,896	447,880	251,250	.....	.....	.....	30,000	215,292,167	1905	62.6
1906	8,378,184	126,493,936	53,577	569,753	58,897,311	5,467,967	1,710,768	578,610	4,015,803	8,180,657	536,294	502,500	.....	.....	.....	30,000	213,415,360	1906	59.2
1907	8,118,207	166,095,335	59,875	788,872	61,850,734	8,455,841	2,001,838	756,631	4,344,162	9,982,597	756,226	1,005,000	101	.....	.....	30,000	264,245,419	1907	63.2
1908	8,252,157	178,527,355	50,966	527,987	62,186,447	12,612,295	2,070,145	1,009,278	5,047,038	10,283,357	1,011,180	3,932,900	11,472	169	.....	30,000	285,552,746	1908	62.5
1909	9,327,278	183,170,874	42,388	420,755	65,970,350	14,932,799	1,889,563	1,018,837	6,676,517	11,041,852	1,316,118	2,713,500	18,431	57,143	.....	30,000	298,616,405	1909	61.3
1910	9,723,806	209,557,248	50,830	315,895	70,336,574	12,673,688	1,930,661	1,032,522	6,137,990	11,030,620	1,330,105	3,634,080	20,753	142,857	.....	20,000	327,937,629	1910	64.0
1911	11,107,450	220,449,391	74,709	291,096	66,183,691	10,518,270	1,658,903	1,017,045	6,451,203	12,172,949	1,368,274	12,552,798	13,119	285,307	9,150	20,000	344,174,355	1911	64.0
1912	12,976,232	222,935,044	53,778	243,336	68,019,208	9,538,174	1,642,405	1,091,950	7,116,672	10,845,624	1,751,143	16,558,215	47,007	436,805	205,905	20,000	352,446,598	1912	63.2
1913	13,554,768	248,446,230	47,198	228,080	62,814,356	8,818,130	1,647,009	1,023,764	7,900,749	11,172,294	2,133,261	25,696,291	130,618	503,616	94,635	20,000	383,547,399	1913	64.7
1914	12,626,579	265,742,235	30,849	215,805	67,020,522	5,011,330	1,748,078	995,764	7,403,722	11,834,802	1,917,602	26,235,403	275,500	643,533	777,038	20,000	403,745,342	1914	65.8
1915	12,029,913	281,104,104	41,898	215,464	68,548,062	4,158,899	3,118,464	995,764	8,202,674	12,386,800	2,487,251	32,910,508	516,120	750,000	262,208	10,000	427,740,129	1915	65.7
1916	10,298,208	300,767,158	50,585	198,123	72,801,110	6,461,706	2,997,178	995,764	8,491,137	13,174,399	2,550,645	40,545,712	796,920	928,581	411,000	25,000	461,493,226	1916	65.2
1917	2,681,870	335,315,601	50,334	205,332	69,000,000	5,965,447	2,898,654	995,764	8,078,843	12,928,955	2,533,417	55,292,770	1,144,737	1,599,455	1,008,750	7,004,973	506,702,902	1917	66.2
1918	8,730,235	355,927,716	35,953	304,741	40,436,182	5,591,620	2,449,069	211,286	8,000,000	13,284,936	2,536,102	63,828,327	1,321,315	2,082,068	2,079,750	7,390,080	514,729,354	1918	69.1
1919	6,634,000	377,719,000	35,000	241,000	25,495,000	6,054,000	2,175,000	234,000	8,735,000	15,428,000	2,816,000	87,073,000	1,183,000	1,841,000	1,501,100	750,000	544,885,000	1919	62.0
1920	7,435,344	443,402,000	34,180	196,937	25,429,600	5,606,116	2,139,777	212,046	7,500,000	17,329,210	2,816,649	163,340,000	1,665,989	2,083,027	1,042,000	14,221,125	694,854,000	1920	63.8
1921	8,368,000	472,183,000	34,400	190,338	29,150,000	5,167,000	2,447,000	200,000	8,000,000	16,958,105	3,699,280	193,397,587	1,747,410	2,354,000	1,255,000	19,913,880	765,065,000	1921	61.7
1922	9,843,000	557,531,000	31,000	170,000	32,966,000	.....	2,042,000	319,000	7,700,000	16,720,000	5,314,000	182,278,000	3,018,000	2,445,000	1,188,000	33,235,000	854,809,000	1922	65.2
1923	10,867,000	732,407,000	34,000	170,000	39,156,000	5,373,000	1,789,000	312,000	8,320,000	19,868,000	5,699,000	149,538,000	3,400,000	3,051,000	1,054,000	37,855,000	1,019,213,000	1923	71.8
1924	13,000,000	710,463,600	.....	170,000	44,000,000	5,750,000	1,666,660	33,330	8,000,000	21,000,000	6,000,000	144,000,000	4,500,000	3,333,330	1,000,000	44,045,000	1,009,461,920	1924	70.3
1925	15,000,000	759,131,870	48,000	175,000	48,000,000	6,100,000	2,000,000	470,000	8,500,000	23,000,000	11,000,000	113,000,000	5,000,000	4,800,000	1,200,000	62,202,000	1,059,626,870	1925	71.8
Totals	222,539,000	9,697,564,807	1,199,800	25,747,000	2,097,393,000	188,101,350	49,754,660	18,454,350	163,978,000	317,130,000	61,509,000	1,315,105,000	24,390,000	27,340,330	12,661,000	255,009,000	13,444,775,970		

*Includes Persia, 37,000,000; Venezuela 19,000,000; British Borneo; 5,000,000;; Colombia 500,000; France 500,000; Czechoslovakia, 76,000; Barbados, 10,000; Algeria 14,000; Cuba, 4,000; Others 98,000.

World Wide

No. 601 — Gaso Walking Beam Pump—for pressures from 450 to 600 pounds. Straight-line pull, reducing wear on packing and stuffing box.

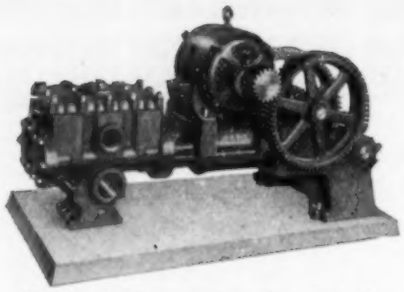
No. 604½—For taking gas from pumping well or putting vacuum on well.



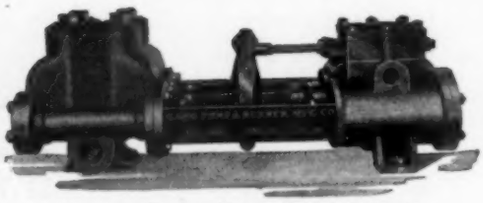
No. 501—For working pressures from 200 to 800 pounds. Large, direct, unobstructed fluid passages and valve areas.

No. 407—A large-capacity, high pressure steam pump for 600 to 1000-lb. pressures.

Fewer Parts Plus Greater Strength Equals Increased Efficiency



No. 501-E—A general service pump fitted for electrical operation. (In the field of electrically operated pumps Gaso is a pioneer.)



No. 404—Duplex Piston Steam Pump for pressures from 500 to 800 pounds. Valve pots accessible from outside.

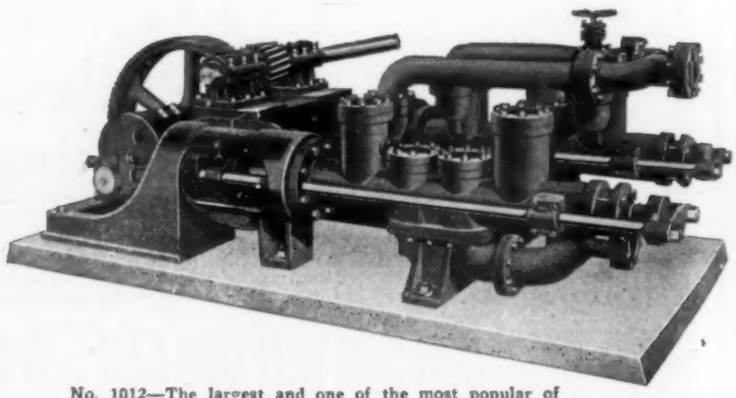
WHERE oil is found, Gaso Pumps will also be found.

Visit Russia, India, Egypt, British West Indies, South America, Roumania or Spain, and you will find Gasos giving the same dependable service that they give in the Mid-Continent, Gulf Coast, California or Eastern Fields in America.

The reason lies solely in the service Gaso users receive. We put into our pumps the best materials and the finest workman-

Gaso Pump

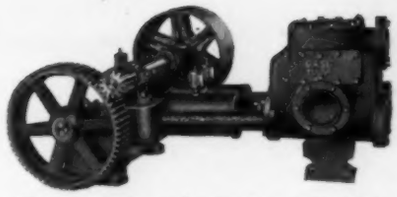
Tulsa



No. 1012—The largest and one of the most popular of the Gaso line. Capacity, 130 to 204 gallons a minute against pressures from 700 to 900 lbs. per square inch.

ship we can buy. The purchaser gets out of them the most dependable pump service obtainable.

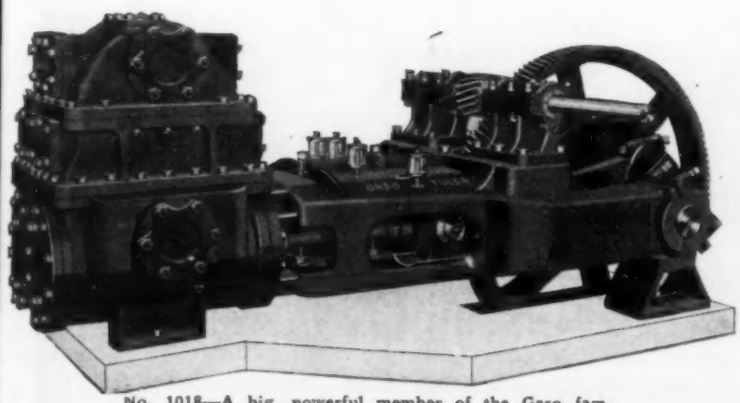
The pictures on this page show a few members of the Gaso "family." The entire line, embracing types for every field, refinery and pipe line requirement, is described in our new 88-page catalogue. We will gladly send you a copy of this catalogue without obligation.



No. 507—A suction-service type Gear Driven Pump for 175 to 225-pound pressures.

No. 301—Gaso Piston Power Pump—Jerker Pattern. Made in several sizes with 24-inch and 30-inch stroke.

urner Mfg. Co.
Oklahoma



No. 1018—A big, powerful member of the Gaso family designed for main line pipe line use. Available in three sizes—6, 8 or 10 x 18.

No. 604 — Gaso Walking Beam Pump for Gas or Vacuum. For taking gas from pumping well or putting vacuum on well. Built for rough service.

No. 401—For 200 to 800-pound pressures. Simple, yet does the work of much more expensive and complicated equipment.

We also make a Complete Line of FITTINGS

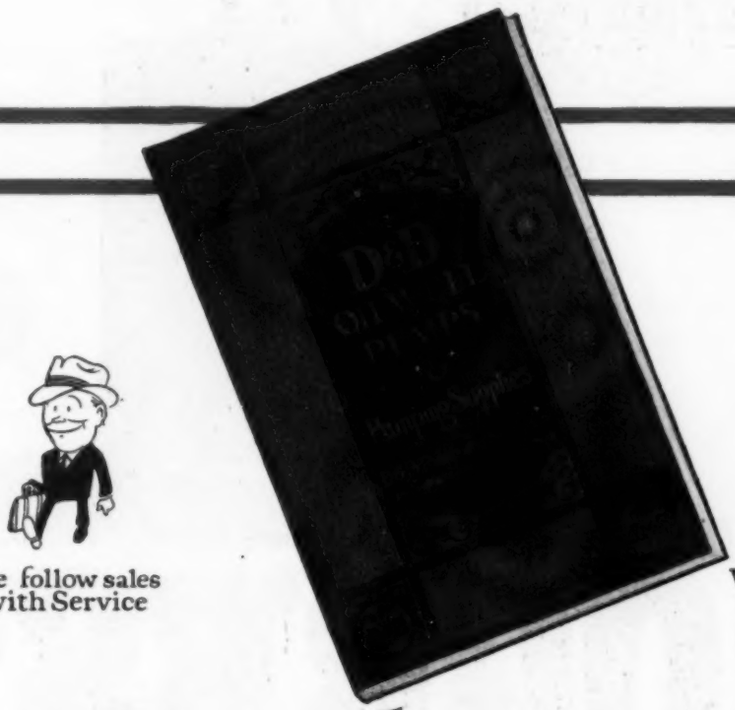
Petroleum Marketed in the United States, 1859-1925, in Barrels of 42 Gallons

(OIL BURNED ON LEASE NOT INCLUDED)

Year	Pennsylvania and New York	Ohio	West Virginia	California	Kentucky and Tennessee	Colorado	Indiana	Illinois	Kansas	Texas	Missouri	Oklahoma	Wyoming (Includes Montana and New Mexico)	Louisiana	United States	Total Value	Year
1859	2,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,000	$ 32,000	1859
1860	500,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	500,000	4,800,000	1860
1861	2,113,609	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,113,609	1,035,668	1861
1862	3,056,690	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,056,690	3,209,525	1862
1863	2,611,309	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,611,309	8,225,663	1863
1864	2,116,109	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,116,109	20,896,576	1864
1865	2,497,700	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,497,700	16,459,853	1865
1866	3,597,700	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,597,700	30,455,398	1866
1867	3,347,300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,347,300	8,066,993	1867
1868	3,646,117	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,646,117	13,217,174	1868
1869	4,215,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,215,000	23,730,450	1869
1870	5,260,745	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,260,745	20,503,754	1870
1871	5,205,234	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,205,234	22,591,180	1871
1872	6,293,194	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,293,194	21,440,503	1872
1873	9,893,786	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,983,786	18,100,464	1873
1874	10,926,945	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,926,945	12,647,527	1874
1875	8,787,514	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,787,514	7,368,133	1875
1876	8,968,936	31,763	120,000	12,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,132,669	22,982,822	1876
1877	13,135,475	29,888	172,000	13,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13,350,363	31,788,566	1877
1878	15,163,462	38,179	180,000	15,227	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15,396,868	18,044,620	1878
1879	19,685,176	29,112	180,000	19,858	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19,914,146	17,210,708	1879
1880	26,027,631	38,940	179,000	40,552	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26,286,123	24,600,638	1880
1881	27,376,509	33,867	151,000	99,862	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27,661,238	25,448,339	1881
1882	30,053,500	39,761	128,000	128,636	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30,349,897	23,631,165	1882
1883	23,128,389	47,632	126,000	142,857	4,755	.....	.....	.....	.....	.....	.....	.....	.....	.....	23,449,663	25,790,252	1883
1884	23,772,209	90,081	90,000	262,000	4,148	.....	.....	.....	.....	.....	.....	.....	.....	.....	24,218,438	20,595,966	1884
1885	20,776,041	661,580	91,000	325,000	5,164	.....	.....	.....	.....	.....	.....	.....	.....	.....	21,858,785	19,198,243	1885
1886	25,798,000	1,782,970	102,000	377,145	4,726	.....	.....	.....	.....	.....	.....	.....	.....	.....	28,064,841	19,996,313	1886
1887	22,356,193	5,022,632	145,000	678,572	4,791	76,295	.....	.....	.....	.....	.....	.....	.....	.....	28,283,483	18,877,094	1887
1888	16,488,668	10,010,868	119,448	690,333	5,096	297,612	.....	.....	.....	.....	.....	.....	.....	.....	27,612,025	17,947,620	1888
1889	21,487,435	12,471,466	544,113	303,220	5,400	316,476	33,375	1,460	500	48	20	.....	.....	.....	35,163,513	26,963,340	1889
1890	28,458,208	16,124,656	492,578	307,360	6,000	368,842	63,496	900	1,200	54	278	.....	.....	.....	45,823,572	35,365,105	1890
1891	33,009,236	17,740,301	2,406,218	323,600	9,000	655,482	136,634	675	1,400	54	25	30	.....	.....	54,292,655	38,529,553	1891
1892	28,422,377	16,362,921	3,810,086	385,049	6,500	824,000	136,634	521	5,000	45	10	80	.....	.....	50,514,657	25,906,463	1892
1893	20,314,513	16,249,769	8,445,412	470,179	3,000	594,390	2,335,293	400	18,000	50	50	10	.....	.....	48,431,066	28,950,526	1893
1894	19,019,990	16,792,154	8,577,624	705,969	1,500	515,746	3,688,666	300	40,000	60	8	130	2,369	.....	49,344,518	35,522,095	1894
1895	19,144,390	19,545,233	8,120,125	1,208,482	1,500	438,232	4,386,132	200	44,430	50	10	37	3,455	.....	52,899,276	57,632,296	1895
1896	20,584,421	23,941,169	10,019,770	1,252,777	1,680	361,450	4,680,732	250	113,571	1,450	43	170	2,878	.....	60,960,361	58,518,709	1896
1897	19,262,066	21,560,515	13,090,045	1,903,411	322	384,934	4,122,356	300	81,098	65,975	19	625	3,650	.....	60,475,516	40,874,072	1897
1898	15,948,464	18,738,708	13,615,101	2,257,207	5,568	444,383	3,730,907	360	71,980	546,070	40	.....	5,475	.....	55,364,233	44,193,359	1898
1899	14,374,512	21,142,108	13,910,630	2,642,095	18,280	390,278	3,848,182	360	69,700	669,013	132	.....	5,560	.....	57,070,850	64,603,904	1899
1900	14,559,127	22,362,730	16,195,675	4,324,484	62,259	317,385	4,874,392	200	74,714	836,039	[1]1,602	6,472	5,450	.....	63,620,529	75,989,313	1900
1901	13,831,996	21,648,083	14,177,126	8,786,330	137,259	460,520	5,757,086	250	179,151	4,393,658	[2]2,335	10,000	5,400	....	69,389,194	66,417,335	1901
1902	13,183,610	21,014,231	13,513,345	13,984,268	185,331	396,901	7,480,896	200	331,749	18,083,658	[3]757	37,100	6,253	548,617	88,766,916	71,178,910	1902
1903	12,518,134	20,480,286	12,899,395	24,382,372	554,286	483,925	9,186,411	.....	932,214	17,955,572	[4]3,000	138,911	8,960	917,771	100,461,337	94,694,050	1903
1904	12,239,026	18,876,631	12,644,686	29,649,434	998,284	501,763	11,339,124	.....	4,250,779	22,241,413	[5]2,572	1,366,748	11,542	2,958,958	117,080,960	101,175,455	1904
1905	11,554,777	16,346,660	11,578,110	33,427,473	1,217,337	376,238	10,964,247	181,084	[6]12,013,495	28,136,189	[7]3,100	([8])	8,454	8,910,416	134,717,580	34,157,399	1905
1906	11,500,410	14,787,763	10,120,935	33,098,598	1,213,548	327,582	7,673,477	4,397,050	[9]21,718,648	12,567,897	[10]300	([8])	[11]7,000	9,077,528	126,493,936	92,444,735	1906
1907	11,211,606	12,207,448	9,095,296	39,748,375	820,844	331,851	5,128,037	24,281,973	2,409,521	12,322,696	[12]4,000	43,524,128	[13]9,339	5,000,221	166,095,335	120,106,749	1907
1908	10,584,453	10,858,797	9,523,176	44,854,737	[14]727,767	379,653	3,283,629	33,686,238	1,801,781	11,206,464	[15]15,246	45,798,765	[16]17,775	5,788,874	178,527,355	129,079,184	1908
1909	10,434,300	10,632,793	10,745,092	55,471,601	[14]639,016	310,861	2,296,086	30,898,339	1,263,764	9,534,467	[15]5,750	47,859,218	[16]20,056	3,059,531	183,170,874	128,328,487	1909
1910	9,848,500	9,916,370	11,753,071	73,010,560	[14]468,774	239,794	2,159,725	33,143,362	1,128,668	8,899,266	[17]3,615	52,028,718	[16]115,430	6,841,395	209,557,248	127,899,688	1910
1911	9,200,673	8,817,112	9,795,464	81,134,391	[14]472,458	226,926	1,695,289	31,317,038	1,278,819	9,526,474	[17]7,995	56,069,637	[16]186,695	10,720,420	220,449,391	134,944,752	1911
1912	8,712,076	[18]8,969,007	12,128,962	[19]87,272,593	[14]848,368	206,052	970,009	28,601,308	1,592,796	11,735,057	([8])	51,427,071	1,572,306	9,263,439	222,935,044	164,213,247	1912
1913	8,865,493	8,781,468	11,567,299	97,788,525	[14]524,568	188,568	956,095	23,893,899	2,375,029	15,009,478	[20]10,843	63,579,384	2,406,522	12,498,828	248,446,230	237,121,388	1913
1914	9,109,309	8,536,352	9,680,033	99,775,327	[14]502,441	222,773	1,335,456	21,919,749	3,103,585	20,068,184	[20]7,792	73,631,724	3,560,375	14,309,435	265,762,535	214,125,215	1914
1915	8,726,483	7,825,326	9,264,798	86,591,535	[14]437,274	208,475	875,758	19,041,695	2,823,487	24,942,701	[20]14,265	97,915,243	4,245,525	18,191,539	281,104,104	179,462,890	1915
1916	8,466,481	7,744,511	8,731,184	90,951,936	1,203,246	197,235	769,036	17,714,235	8,738,077	27,684,605	.....	107,071,715	6,234,137	15,248,138	300,767,158	330,859,868	1916
1917	8,612,885	7,750,540	8,379,285	93,877,549	3,100,356	121,231	739,432	15,776,860	36,536,125	32,413,287	.....	107,507,471	8,978,680	11,392,201	[21]335,315,601	522,635,213	1917
1918	8,216,655	7,283,005	7,866,628	97,531,997	4,376,342	143,286	877,558	13,365,974	45,451,017	38,730,931	.....	103,347,070	12,396,287	16,042,600	[22]355,937,716	703,943,961	1918
1919	9,441,936	8,243,592	9,032,688	101,221,784	5,027,904	241,680	929,780	12,436,000	34,769,100	85,312,000	.....	81,127,900	13,342,320	16,250,000	377,719,000	867,753,379	1919
1920	8,360,400	7,412,000	8,173,030	105,668,000	8,692,600	110,000	932,000	10,772,000	38,500,000	96,000,000	.....	105,725,000	17,407,000	35,649,000	443,402,000	1,360,000,000	1920
1921	8,414,000	7,333,000	8,003,000	114,709,000	8,963,000	108,200	1,163,000	10,044,000	36,232,000	103,322,000	.....	113,978,000	20,656,800	26,523,000	469,639,000	753,000,000	1921
1922	8,505,000	6,778,000	7,015,000	138,907,000	9,603,000	96,500	1,089,000	9,409,000	31,891,000	117,106,545	.....	147,414,000	29,177,265	33,889,480	556,407,725	.....	1922
1923	8,590,000	7,123,000	6,452,000	258,387,119	8,116,140	95,560	1,049,000	8,724,000	29,406,925	125,991,628	.....	155,573,392	48,258,170	22,812,685	725,057,305	.....	1923
1924	8,860,000	6,798,000	5,899,000	230,366,303	7,405,300	413,300	938,000	8,082,000	28,351,001	133,613,985	.....	170,180,463	42,480,700	20,595,136	710,463,430	.....	1924
1925	9,596,000	7,226,000	5,859,000	231,768,982	6,835,700	1,123,000	830,000	7,260,000	34,497,756	150,010,406	.....	167,951,575	36,030,875	21,414,878	759,131,872	.....	1925
Totals	849,970,050	514,228,978	343,918,398	2,282,254,764	72,840,832	13,507,550	113,036,364	364,952,380	482,370,080	1,035,584,519	86,997	1,813,270,787	247,372,703	337,904,090	8,750,192,041	.....	

Arkansas 1921 10,190,000
Arkansas 1922 15,869,635
Arkansas 1923 44,488,746
Arkansas 1924 46,480,542
Arkansas 1925 78,717,700
Total 195,746,623

[1]Includes Alaska, Michigan and Missouri production, estimated at 10,300 barrels in 1917 and 7,943 barrels in 1918. [2]Includes production of Michigan. [3]Includes production of Oklahoma. [4]Included with Kansas. [5]Estimated. [6]Includes production of Utah. [7]No. production in Tennessee recorded. [8]Includes small production in Alaska. [9]No production in Missouri; Michigan included in Ohio. [10]Includes production of Alaska, Michigan and New Mexico. [11]Includes production of Alaska and Michigan.



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PETROLEUM RECTIFYING COMPANY OF CALIFORNIA

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336 Humble Building, Houston, Texas.

California's Petroleum Production

FROM THE BEGINNING OF THE INDUSTRY TO DECEMBER 31, 1925, BY FIELDS

Compiled from data furnished by federal and state bureaus, the American Petroleum Institute, and the Independent Oil Producers Agency

(Barrels of 42 U. S. Gallons)

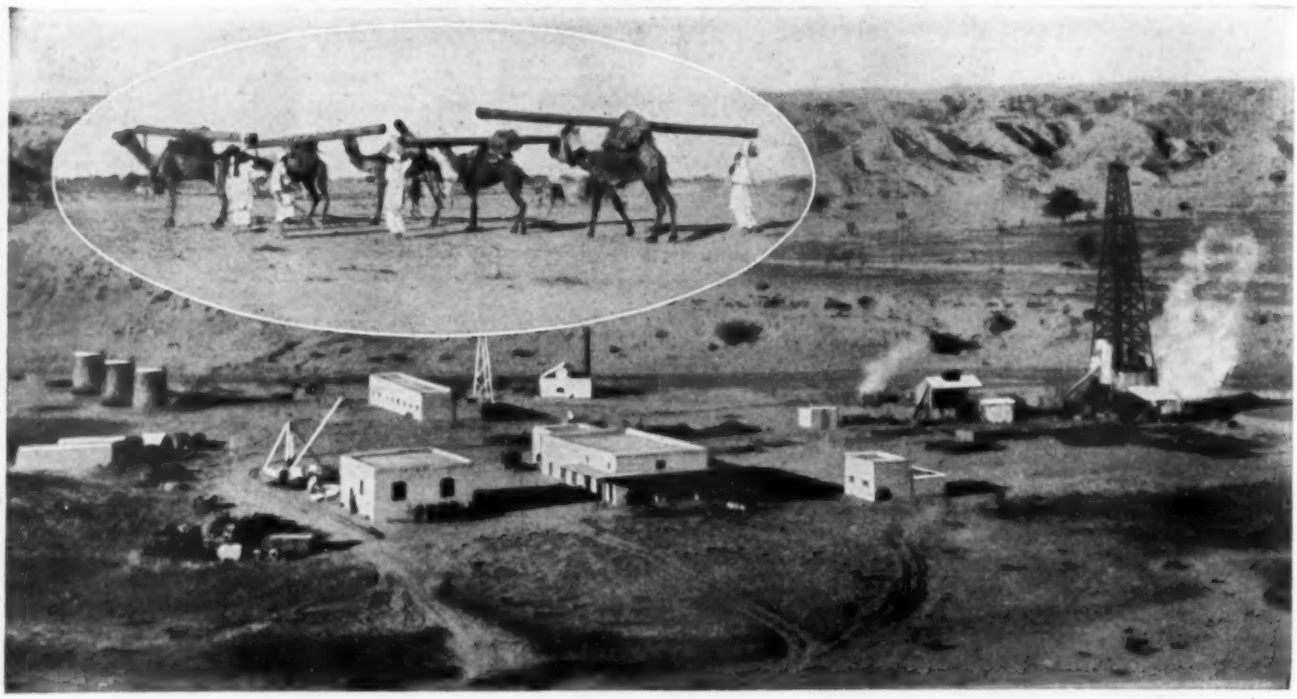
Year Prior	Kern River	McKittrick	Midway	Sunset	Elk Hills	Coalinga	Lost Hills-Belridge	Santa Maria-Lompoc	Coyote	Montebello	Richfield	Whittier	Santa Fe Springs
1876	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1877	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1878	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1879	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1880	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1881	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1882	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1883	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1884	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1885	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1886	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1887	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1888	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1889	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1890	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1891	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1892	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1893	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1894	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1895	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1896	.....	.....	.....	.....	.....	14,119	.....	.....	.....	.....	.....	.....	.....
1897	.....	.....	.....	.....	.....	70,140	.....	.....	.....	.....	.....	.....	.....
1898	.....	10,000	.....	.....	.....	154,000	.....	.....	.....	.....	.....	.....	.....
1899	.....	15,000	.....	.....	.....	439,372	.....	.....	.....	.....	.....	.....	.....
1900	826,775	80,000	.....	12,500	.....	547,960	.....	.....	.....	.....	.....	.....	.....
1901	3,278,840	430,450	4,235	188,600	.....	525,433	.....	.....	.....	.....	.....	.....	.....
1902	8,988,046	619,296	3,048	167,558	.....	571,233	.....	94,188	.....	.....	.....	.....	.....
1903	16,342,099	1,353,206	27,305	352,565	.....	2,138,058	.....	204,890	.....	.....	.....	.....	.....
1904	17,226,240	1,856,225	910	390,425	.....	5,097,853	.....	700,450	.....	.....	.....	.....	.....
1905	15,253,845	1,373,030	18,530	419,212	.....	8,882,125	.....	3,402,800	.....	.....	.....	.....	.....
1906	12,825,166	680,756	11,800	307,550	.....	8,401,105	.....	4,799,411	.....	.....	.....	.....	.....
1907	12,346,014	2,415,840	149,944	704,805	.....	8,996,268	.....	8,249,236	.....	.....	.....	.....	.....
1908	13,803,579	3,076,300	434,578	1,463,510	.....	10,725,795	.....	8,699,350	.....	.....	.....	.....	.....
1909	14,508,242	5,807,360	2,234,455	1,999,701	.....	15,406,619	.....	8,017,455	.....	.....	.....	.....	.....
1910	14,776,435	5,471,613	11,174,207	9,218,904	.....	18,646,570	4,900	7,607,830	.....	.....	.....	.....	.....
1911	14,078,890	5,477,532	21,584,602	5,559,069	.....	18,311,251	168,410	7,465,074	.....	.....	.....	.....	.....
1912	12,446,445	5,094,465	25,948,980	5,590,824	.....	19,546,122	2,680,961	6,801,966	1,159,303	.....	.....	747,439	.....
1913	9,980,940	4,496,842	33,040,129	5,984,651	.....	18,604,626	5,274,553	5,817,711	3,777,359	.....	.....	690,133	.....
1914	7,030,545	3,820,857	37,479,228	12,546,615	.....	15,925,887	4,830,921	4,303,080	6,998,659	.....	.....	636,789	.....
1915	8,034,974	3,552,801	33,311,486	6,006,607	.....	13,548,159	4,318,550	4,536,840	6,610,508	.....	.....	758,163	.....
1916	8,402,525	3,230,644	32,156,818	6,768,658	.....	14,381,493	4,852,431	4,422,410	8,588,699	.....	.....	1,014,667	.....
1917	8,495,610	3,252,544	29,487,812	7,072,333	.....	15,938,543	6,295,329	5,798,070	11,458,471	789,635	.....	1,156,752	.....
1918	7,921,515	3,050,627	27,439,993	6,608,940	.....	16,283,066	5,420,079	7,143,750	12,514,598	6,839,267	.....	1,046,467	.....
1919	7,563,025	2,810,848	26,133,048	5,589,885	281,019	16,385,610	4,554,821	6,030,910	10,240,359	12,100,784	965,408	1,001,048	.....
1920	7,456,515	2,607,240	25,217,420	5,423,781	7,275,809	15,464,198	4,139,767	5,928,060	8,732,435	11,124,585	2,565,346	842,184	.....
1921	6,715,680	2,056,101	24,172,350	4,613,965	18,085,425	12,340,637	3,261,281	5,563,324	7,419,050	9,065,723	8,206,962	735,376	208,216
1922	7,317,288	2,417,434	24,152 026	5,542,816	11,891,030	9,159,368	2,814,824	3,797,903	7,000,373	6,692,024	8,314,528	717,729	11,032,955
1923	6,816,134	2,191,702	27,803,281		8,174,371	5,210,839	1,843,483	3,003,672	2,447,825	4,075,669	6,121,335	645,219	79,781,275
1924	6,765,977	2,092,940	37,559,084		13,675,686	10,084,725	1,527,878	2,864,792	5,716,479	6,214,762	4,443,548	767,805	26,434,535
1925	5,951,217	2,096,736	37,391,003		11,833,366	7,811,886	1,736,960	2,652,427	7,188,569	6,895,949	4,258,973	741,090	19,090,766
Total	255,152,561	71,438,389	549,469,746		71,216,706	289,613,050	53,725,148	117,905,599	100,152,687	63,798,398	34,876,100	11,500,861	136,547,747

Figures for MIDWAY and SUNSET fields are Combined after 1922

Year Prior	Huntington Beach	Fullerton	Long Beach	Summerland	Newhall and Ventura Co.	Los Angeles and Salt Lake	Torrance	Wheeler Ridge	Dominguez	Rosecrans	Inglewood	Seal Beach	Miscellaneous	Total
Prior	.....	.....	.....	.....	175,000	.....	.....	.....	.....	.....	.....	.....	.....	175,000
1876	.....	.....	.....	.....	12,000	.....	.....	.....	.....	.....	.....	.....	.....	12,000
1877	.....	.....	.....	.....	13,000	.....	.....	.....	.....	.....	.....	.....	.....	13,000
1878	.....	.....	.....	.....	15,227	.....	.....	.....	.....	.....	.....	.....	.....	15,227
1879	.....	.....	.....	.....	19,858	.....	.....	.....	.....	.....	.....	.....	.....	19,858
1880	.....	.....	.....	.....	40,552	.....	.....	.....	.....	.....	.....	.....	.....	40,552
1881	.....	.....	.....	.....	99,862	.....	.....	.....	.....	.....	.....	.....	.....	99,862
1882	.....	.....	.....	.....	128,636	.....	.....	.....	.....	.....	.....	.....	.....	128,636
1883	.....	.....	.....	.....	142,857	.....	.....	.....	.....	.....	.....	.....	.....	142,857
1884	.....	.....	.....	.....	262,000	.....	.....	.....	.....	.....	.....	.....	.....	262,000
1885	.....	Early	.....	.....	325,000	.....	.....	.....	.....	.....	.....	.....	.....	325,000
1886	.....	production	.....	.....	377,145	.....	.....	.....	.....	.....	.....	.....	.....	377,145
1887	.....	included	.....	.....	678,572	.....	.....	.....	.....	.....	.....	.....	.....	678,572
1888	.....	under	.....	.....	690,333	.....	.....	.....	.....	.....	.....	.....	.....	690,333
1889	.....	Newhall	.....	.....	303,220	.....	.....	.....	.....	.....	.....	.....	.....	303,220
1890	.....	and	.....	.....	307,360	.....	.....	.....	.....	.....	.....	.....	.....	307,360
1891	.....	Ventura	.....	.....	323,600	.....	.....	.....	.....	.....	.....	.....	.....	323,600
1892	.....	County	.....	.....	385,049	.....	.....	.....	.....	.....	.....	.....	.....	385,049
1893	.....	.....	.....	.....	470,179	.....	.....	.....	.....	.....	.....	.....	.....	470,179
1894	.....	.....	.....	1,800	570,469	196,094	.....	.....	.....	.....	.....	.....	14,715	783,078
1895	.....	.....	.....	16,904	474,624	749,695	.....	.....	.....	.....	.....	.....	4,116	1,245,339
1896	.....	.....	.....	39,792	298,866	902,868	.....	.....	.....	.....	.....	.....	2,135	1,257,780
1897	.....	12,000	.....	130,136	631,133	1,064,158	.....	.....	.....	.....	.....	.....	4,000	1,911,569
1898	.....	60,000	.....	132,217	763,871	1,126,000	.....	.....	.....	.....	.....	.....	3,000	2,249,088
1899	.....	217,599	.....	208,370	743,998	1,052,036	.....	.....	.....	.....	.....	.....	1,500	2,677,875
1900	.....	511,550	.....	183,486	628,734	1,280,000	.....	.....	.....	.....	.....	.....	248,945	4,319,950
1901	.....	753,198	.....	203,616	495,943	1,830,000	.....	.....	.....	.....	.....	.....	.....	7,710,315
1902	.....	1,103,793	.....	136,252	646,496	2,027,000	.....	.....	.....	.....	.....	.....	.....	14,356,910
1903	.....	2,305,613	.....	131,125	682,185	793,765	.....	.....	.....	.....	.....	.....	3,670	24,334,481
1904	.....	2,224,550	.....	120,506	650,779	1,241,304	.....	.....	.....	.....	.....	.....	39,392	29,548,634
1905	.....	2,118,312	.....	96,871	476,898	2,226,768	.....	.....	.....	.....	.....	.....	29,650	34,298,041
1906	.....	2,434,512	.....	72,810	404,379	2,675,650	.....	.....	.....	.....	.....	.....	10,000	32,623,229
1907	.....	3,294,206	.....	69,060	435,324	3,372,465	.....	.....	.....	.....	.....	.....	69,090	40,102,512
1908	.....	4,273,314	.....	67,862	498,015	5,138,959	.....	.....	.....	.....	.....	.....	125,475	48,306,737
1909	.....	5,157,252	.....	66,338	516,628	4,350,898	.....	.....	.....	.....	.....	.....	126,775	58,191,723
1910	.....	6,281,221	.....	74,725	652,575	3,729,618	.....	.....	.....	.....	.....	.....	58,970	77,697,568
1911	.....	7,081,165	.....	71,255	661,785	3,223,661	.....	.....	.....	.....	.....	.....	61,350	83,744,044
1912	.....	5,813,037	.....	65,715	859,885	3,073,427	.....	.....	.....	.....	.....	.....	45,870	90,074,439
1913	.....	6,189,561	.....	62,406	1,022,052	2,898,846	.....	.....	.....	.....	.....	.....	27,375	97,867,184
1914	.....	6,495,100	.....	55,743	968,421	2,504,475	.....	.....	.....	.....	.....	.....	27,375	103,623,695
1915	.....	5,661,878	.....	53,000	1,036,305	2,110,133	.....	.....	.....	.....	.....	.....	27,375	89,566,779
1916	.....	5,076,306	.....	56,775	1,122,033	1,721,433	.....	.....	.....	.....	.....	.....	27,450	91,822,362
1917	.....	4,750,382	.....	56,570	1,186,407	1,501,799	.....	.....	.....	.....	.....	.....	27,375	97,267,832
1918	.....	4,403,281	.....	54,613	1,386,518	1,397,781	.....	.....	.....	.....	.....	.....	27,375	101,637,870
1919	.....	4,350,084	.....	53,680	1,792,465	1,341,415	.....	.....	.....	.....	.....	.....	27,375	101,221,784
1920	38,116	5,391,497	.....	54,910	2,122,449	1,311,264	.....	.....	.....	.....	.....	.....	25,610	105,721,186
1921	2,518,812	6,012,839	75,588	54,155	2,375,479	1,344,926	.....	.....	.....	.....	.....	.....	24,035	114,849,924
1922	11,169,383	4,512,974	18,560,595	48,339	3,015,877	1,258,287	190,785	.....	.....	.....	.....	.....	20,338	139,626,876
1923	34,355,642	4,064,661	68,810,361	52,862	3,702,404	1,192,036	3,128,694	128,674	157,698	.....	.....	.....	21,058	263,728,895
1924	17,547,916	4,115,144	60,119,659	53,240	4,049,533	907,418	17,517,908	345,427	6,813,489	623,847	10,405	3,100	*21,006	230,366,303
1925	15,861,954	4,490,298	40,116,683	48,213	9,003,751	630,813	13,298,212	346,364	13,449,723	7,391,456	19,029,742	.....	†52,841	231,568,982
Total	81,491,823	109,155,537	187,682,786	2,593,346	48,645,993	60,175,012	34,135,599	820,464	20,420,910	8,015,303	19,040,147	3,100	1,205,331	2,329,072,434

*Watsonville. †Watsonville and Newport.

Diamond Drilling Is World Wide



Sullivan "FK" Diamond Drill in the Punjab, India, which went to a depth of 6007 feet last year in the search for oil. The inset shows part of a camel train transporting casing to the drill site.

THE CORE TELLS THE STORY

Sullivan Diamond Core Drills are in use, or have been used recently for oil field exploration, in fields as widely scattered as Mexico, India, Venezuela, Borneo, Russia, Peru, Algeria, and Portuguese East Africa.

Foreign users employ the diamond core drill because it gives accurate knowledge (cores) of new fields in the quickest time and at the lowest cost; because it ***finishes the hole*** under difficulties which are impossible to other types, and because it is adaptable to any kind of ground or any depth of hole.

Low cost and ease of transportation, due to light weight and compactness of the outfit, and to the absence of large casings, are important factors.

Sullivan Diamond Core Drills are built in capacities from 500 to 7000 feet in depth. They are fully described in 80-page catalogue No. 4280-O "Diamond Drilling for Oil."

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Production of Texas by Fields

From 1895 to December 31, 1925

Year	Corsicana	Powell	Petrolia	Marion County	Wichita and Wilbarger Counties	Moran	Strawn	Colemas County	Eastland County	Stephens County	Desdemona	Brown County	Thrall	Miscellaneous
1895	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1896	1,450	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1897	65,975	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1898	544,620	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1899	668,483	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1900	829,560	5,479	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1901	763,424	37,121	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1903	401,817	100,143	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1902	571,079	46,812	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1904	374,318	129,329	65,455	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1905	312,595	131,051	101,651	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1906	336,387	675,842	111,072	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1907	276,311	596,897	83,260	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1908	211,117	398,649	82,639	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1909	180,764	383,137	113,485	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1910	137,331	450,188	126,531	251,717	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1911	128,526	373,055	168,965	677,689	899,579	.....	.....	.....	.....	.....	.....	.....	.....	.....
1912	233,282	251,240	197,421	362,870	4,227,104	.....	.....	.....	.....	.....	.....	.....	.....	.....
1913	158,830	283,476	344,868	262,392	8,131,624	.....	.....	.....	.....	.....	.....	.....	.....	.....
1914	133,811	282,279	550,585	180,584	8,227,951	68,191	.....	.....	.....	.....	.....	.....	.....	.....
1915	143,275	237,410	349,857	123,464	5,833,386	109,116	50,498	.....	.....	.....	.....	.....	613,182	4,061
1916	135,263	215,729	302,145	64,971	7,837,386	135,608	175,147	.....	.....	.....	.....	.....	432,695	32,140
1917	131,828	196,855	282,420	57,952	9,541,636	68,118	340,950	.....	93,053	36,219	.....	6,040	176,887	111,220
1918	*361,980	.....	297,320	.....	12,159,032	54,900	185,520	31,253	3,107,120	790,243	.....	451,002	12,000	e130,000
1919	*150,000	.....	212,624	**	30,279,108	32,500	101,300	46,590	22,379,665	10,514,216	7,375,825	213,256	8,200	235,075
1920	530,000	.....	135,385	.....	32,895,485	48,575	512,260	83,785	10,141,385	23,852,050	5,097,745	114,665	8,000	e25,000
1921	305,335	.....	132,295	.....	24,184,955	50,455	262,055	66,190	5,887,420	31,037,710	2,467,115	122,475	73,280	e24,000
1922	245,705	.....	121,295	.....	19,030,508	308,545	602,180	34,915	4,787,315	14,924,980	3,488,755	224,980	51,100	†34,010
1923	*	§	164,635	.....	18,823,394	1,426,180	402,920	48,465	3,764,085	10,062,055	2,761,735	222,655	34,210	92,796
1924	*	§	119,095	.....	†16,047,945	1,267,500	322,606	45,310	2,627,475	7,129,230	2,572,975	193,750	24,930	‡810,010
1925	.....	.....	147,680	.....	†16,433,415	1,084,675	228,000	60,199	3,710,990	5,729,035	.....	760,285	16,935	5,592,695
Totals	.....	.....	4,210,641	1,981,639	214,552,508	4,654,363	3,183,435	416,708	56,498,508	104,075,738	23,764,150	2,309,110	451,419	7,131,157

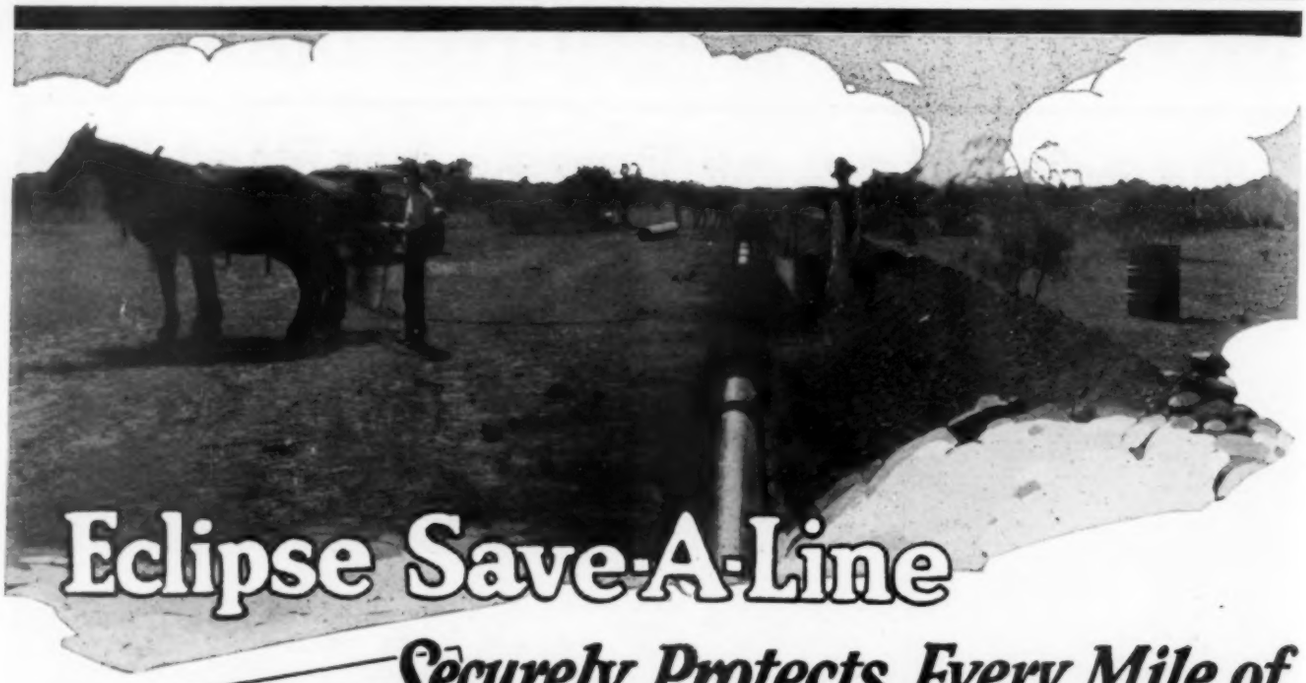
	1920	1921	1922	1923	1924	1925	Totals
Wortham	.....	.....	.....	.....	.....	16,838,150	.....
Mexia-Currie	.....	4,716,805	35,120,405	20,085,395	15,614,955	7,569,690	83,107,250
Young County	134,895	2,820,080	3,723,305	2,351,080	598,300	3,432,320	13,059,980
Archer County	49,850	422,205	849,680	5,088,630	10,869,051	13,578,085	30,857,501
Rockdale-Minerva	.....	.....	93,600	230,462	218,439	.....	.....
Laredo District	.....	.....	765,000	1,591,745	1,965,215	3,487,618	7,809,578
Luling	.....	.....	.....	958,055	10,210,396	9,706,346	20,874,797
Reagan County	.....	.....	.....	.....	1,078,790	8,981,545	10,060,335
Lytton Springs	.....	.....	.....	.....	.....	2,570,709	.....

*Corsicana-Powell, 1925, 17,528,55. Total for Corsicana-Powell field, 96,707,425 barrels. †Includes Burkburnett, 5,206,550 barrels; K-M-A and Iowa Park, 1,742,690 barrels; South Vernon-Wilbarger, 3,189,720 barrels; Electra, 6,294,455 barrels. ‡Includes Callahan, 1,285,215; Panhandle, 1,240,375; Jack County, 8,755; Mitchell County, 798,895; Scurry County, 19,000; Crockett County, 3,320; Montague County, 111,265; Richland, 2,037,095; Throckmorton County, 44,355; Baylor County, 44,420.

Year	Spindle Top	Sour Lake	Batson	Saratoga	Humble	Goose Creek	Orange County	Matagorda County	Damon Mound	Hull	Barbers Hill	West Columbia	Dayton	Blue Ridge and Other Pools	San Antonio Districts and Somervell
1901	3,593,113	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1902	17,420,949	44,338	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1903	8,600,905	8,848,159	4,518	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1904	3,433,842	6,442,357	10,904,737	739,239	.....	.....	.....	151,936	.....	.....	.....	.....	.....	.....	.....
1905	1,600,379	3,369,012	3,790,629	2,922,215	18,066,428	.....	.....	46,470	.....	.....	.....	.....	60,294	.....	.....
1906	1,075,755	2,156,010	2,388,238	2,289,057	3,570,845	.....	.....	8,000	.....	.....	.....	.....	192,460	.....	.....
1907	1,613,513	2,354,997	2,166,554	2,198,585	2,930,842	.....	.....	4,500	.....	.....	.....	.....	120,036	.....	.....
1908	1,747,537	1,595,060	1,593,570	1,634,786	3,778,521	.....	.....	62,640	.....	.....	.....	.....	39,901	31,185	.....
1909	1,388,170	1,703,798	1,206,214	1,183,559	3,237,060	.....	.....	29,103	.....	.....	.....	.....	17,647	87,039	.....
1910	1,182,436	1,518,723	1,113,767	1,024,348	2,495,511	.....	.....	455,999	.....	.....	.....	.....	9,582	129,497	.....
1911	965,939	1,364,880	1,023,493	925,777	2,426,220	.....	.....	561,828	.....	.....	.....	.....	4,344	2,800	.....
1912	822,916	1,175,108	844,563	1,116,655	1,829,923	43,808	.....	300,000e	.....	.....	.....	.....	12,151	1,044	.....
1913	716,374	1,348,053	741,350	937,720	1,504,880	249,641	17,706	294,553	.....	.....	.....	.....	13,329	1,620	.....
1914	580,130	5,209,208	775,804	889,743	2,799,458	134,748	43,208	164,192	.....	.....	.....	.....	18,791	1,780	.....
1915	388,266	4,114,622	703,686	864,266	11,061,802	119,336	21,697	137,481	.....	.....	.....	.....	10,378	47,254	.....
1916	340,441	4,923,332	744,915	781,128	10,925,805	397,291	17,758	158,336	.....	.....	.....	.....	8,571	43,921	.....
1917	308,039	4,763,004	692,417	682,797	7,389,131	7,300,279	7,023	128,011	.....	.....	.....	.....	9,995	159,245	.....
1918	502,265	3,115,033	654,950	790,740	5,645,104	9,419,132	3,425	99,540	486,640	330,300	20,000	136,350	7,442	40,000	58,400
1919	458,680	2,740,142	502,200	616,110	3,270,617	7,288,716	4,400e	53,260	434,700	1,476,405	169,415	8,128,809	1,000	24,910	94,100
1920	323,995	2,073,485	484,035	913,735	3,692,115	5,666,390	4,000	75,775	1,259,375	4,468,615	136,375	10,563,150	1,000	*173,085	245,135
1921	321,080	1,749,625	516,225	936,695	3,098,500	5,647,020	704,870	89,405	1,353,960	8,717,970	49,885	12,573,450	30,410	*461,035	482,340
1922	295,015	1,737,685	430,265	661,870	2,552,940	5,248,065	**	34,730	945,410	6,819,135	236,185	11,631,750	38,925	*415,560	955,510
1923	309,315	2,091,961	391,857	700,661	2,449,744	6,251,761	***	39,290	822,355	7,732,139	172,660	6,598,589	74,983	332,445	§
1924	364,763	1,650,148	541,687	544,910	2,244,795	4,020,264	*	73,003	544,676	7,286,670	72,437	4,964,503	27,451	651,442	1,335,499
1925	428,873	1,585,054	545,567	587,507	1,751,720	3,661,098		34,336	419,011	7,183,796	46,712	4,230,115	6,508	‡790,459	1,404,311
Totals	48,782,604	67,673,794	32,757,361	24,941,103	96,724,661	55,447,449		3,002,388	6,266,127	44,015,030	903,669	58,826,716	705,198	3,394,321	3,039,796

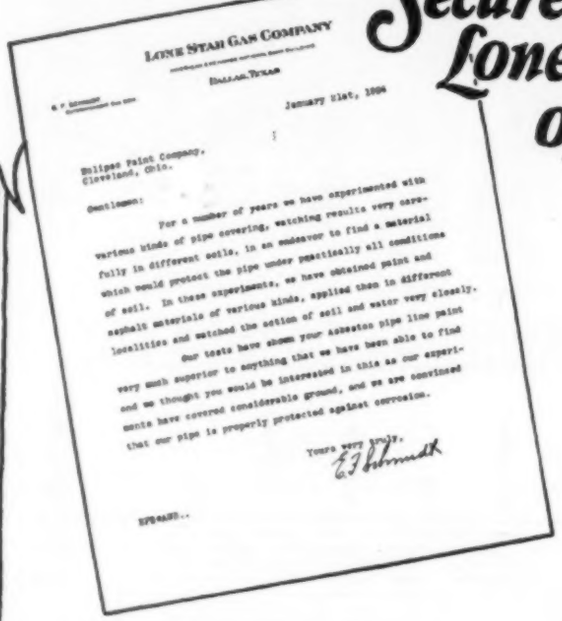
	1920	1921	1922	1923	1924	1925	Totals
Pierce Junct.	.....	1,403,940	1,145,225	332,565	163,316	292,356	3,327,402
Nacogdoches	75,000	103,035	58,875	39,145	37,920	11,746	325,451

*Orange, 1925.—5,023,620. Total for Orange field 20,012,302 barrels. **South Liberty, 1925, 4,551,290 barrels. ‡Includes Boling, 10,500 barrels; Blue Ridge, 302,607 barrels; Big Creek, 329,096 barrels; High Island, 148,256 barrels.



Eclipse Save-A-Line

Securely Protects Every Mile of Lone Star Gas Cos Hundreds of Miles of Pipeline



LONE STAR GAS COMPANY

DALLAS, TEXAS

January 21st, 1926

Eclipse Paint Company,
Cleveland, Ohio.

Gentlemen:

For a number of years we have experimented with various kinds of pipe covering, watching results very carefully in different soils, in an endeavor to find a material which would protect the pipe under practically all conditions of soil. In these experiments, we have obtained paint and asphalt materials of various kinds, applied them in different localities and watched the action of soil and water very closely.

Our tests have shown your Asbestos pipe line paint very much superior to anything that we have been able to find and we thought you would be interested in this as our experiments have covered considerable ground, and we are convinced that our pipe is properly protected against corrosion.

Yours very truly,

E. J. Schmidt

EJS:mjH.

THE Lone Star Gas Company, Dallas, Texas is known throughout the industry as an exceptionally shrewd and careful buyer. Therefore the fact that they definitely selected SAVE-A-LINE for protecting their pipe lines against corrosion, after numerous severe tests were made by their pipe line construction department, is a noteworthy testimonial of superiority.

Eclipse SAVE-A-LINE forms a thick, elastic film or coating, reinforced with asbestos fibre, which contracts and expands with the pipe and is unaffected by moisture, alkali, lime or electrolysis. It can be applied without heating and by inexperienced labor.

Let us know your requirements. We will be glad to send you sample and quote you prices. If you have any particular difficulties peculiar to your soil or climate, our Service Department is at your disposal.

A Few of the Larger Users of Save-A-Line

The Shell Company
The Gulf Pipe Line Company
Associated Pipe Line Company
Humble Pipe Line Company

Their experience is your guarantee of satisfaction.

This product was formerly our Eclipse Asbestos Pipe Line Paint

The Eclipse Paint & Mfg. Co.

Cleveland, Ohio, U.S.A.

DALLAS DENVER SAN FRANCISCO NEWARK PHILADELPHIA

United States Field Statistics for 1925

Recapitulation

State—	Completions 1925	Completions 1924	Producers 1925	Producers 1924	Gas Wells 1925	Gas Wells 1924	Failures 1925	Failures 1924	Initial Production 1925	Initial Production 1924	Annual Production 1925	Annual Production 1924
Arkansas	1,771	1,512	1,354	1,262	108	39	309	211	1,384,155	250,815	78,717,700	46,480,542
California	1,134	1,640	1,033	1,165	1	..	100	475	615,181	447,979	231,768,982	230,536,303
Eastern States	8,516	7,687	5,165	4,671	1855	1666	1496	1350	75,467	70,431	37,616,700	37,982,300
Kansas	1,537	722	917	421	53	59	567	242	188,403	83,350	34,497,756	28,351,001
Louisiana	555	494	298	237	69	152	188	105	70,205	92,765	21,414,878	20,595,136
Mountain States	869	1,258	746	896	20	26	103	336	161,442	161,010	37,153,875	42,893,700
Oklahoma	4,479	4,139	2,557	2,817	412	301	1510	1021	813.348	122,930	167,951,575	170,180,463
Texas	6,545	4,261	4,092	2,842	126	7	2327	1412	1,332,723	916,931	150,010,406	133,613,985
Totals	25,406	21,713	16,162	14,311	2644	2250	6600	5152	4,640,924	3,248,211	759,131,872	710,463,430

Eastern States

State—	Completions 1925	Completions 1924	Producers 1925	Producers 1924	Gas Wells 1925	Gas Wells 1924	Failures 1925	Failures 1924	Initial Production 1925	Initial Production 1924	Annual Production 1925	Annual Production 1924
Illinois	261	168	167	113	8	3	86	52	8,979	5,086	7,260,000	8,082,000
Indiana	129	127	83	82	5	8	41	37	1,565	3,638	830,000	938,000
Michigan	2	...	2	...	...	...	...	...	....	....	.....	.....
Mississippi	...	11	....	4	...	...	...	7	40	106	.....	.....
Kentucky	1567	1471	1048	1105	122	36	397	330	21,159	27,435	6,819,600	7,399,300
New York	262	346	251	331	3	4	8	11	1,388	1,817	1,666,000	1,346,000
Ohio	2411	2104	1406	1163	529	513	476	428	23.630	20.857	7.226,000	6,798,000
Pennsylvania	2108	1741	1662	1351	277	227	169	163	8,655	5,844	7,930,000	7,514,000
Tennessee	43	20	19	4	5	...	19	16	3,653	118	16,100	6,000
West Virginia	1733	1699	527	518	906	875	300	306	6,398	5,520	5,869,000	5,899,000
Totals	8516	7687	5165	4671	1855	1666	1496	1350	75,467	70,431	37,616,700	37,982,300

Louisiana

Field—	Completions 1925	Completions 1924	Producers 1925	Producers 1924	Gas Wells 1925	Gas Wells 1924	Failures 1925	Failures 1924	Initial Production 1925	Initial Production 1924	Annual Production 1925	Annual Production 1924
Anse La Butte	..	..	..	..	..	..	..	..	.....	.....	7,576	6,895
Bellevue	24	77	14	64	3	1	7	12	290	1,610	1,191,373	1,831,218
Bull Bayou	3	..	2	..	..	..	1	..	10	.....	1,562,394	1,813.516
Caddo	81	38	60	31	9	5	12	2	4,466	4,750	4,173,837	4,072,861
Calcasieu Parish	1	..	1	..	..	..	..	..	1,100	68,495	.....	.....
Cotton Valley	131	69	117	51	8	17	6	1	17,285	.....	3,520,357	1,432,314
De Soto Parish	1	..	1	..	..	..	..	..	110	.....	.....	.....
Edgerly	6	8	3	8	1	..	2	..	855	3,165	194,769	164,840
Elm Grove	13	14	3	1	5	..	5	2	90	5	244,011	328,101
Evangeline	30	15	24	7	..	11	6	6	4,611	175	349,319	235,810
Haynesville	..	5	..	2	..	2	..	3	.....	50	4,739,110	6,722,929
Homer	1	3	1	..	..	1	..	2	40	.....	2,399,979	2,866,877
Lockport	20	1	7	1	..	..	13	..	9,470	3,000	477,504	111,232
Monroe	31	115	1	10	26	99	4	6	36	133	.....	.....
Oakland	..	2	..	2	..	..	..	..	.....	375	.....	.....
Sabine Parish	1	..	1	..	..	..	..	..	3	.....	.....	.....
Sarepta-Shongaloo	17	9	..	3	16	6	1	..	.....	117	.....	18,900
Spring Hill	3	..	..	..	1	..	2	..	.....	.....	.....	.....
Urania	11	..	9	..	..	..	2	..	805	.....	18,670	.....
Vinton	70	54	50	46	..	..	20	8	27,525	8,311	2,535,979	1,989,553
Wildcats	111	84	4	11	..	10	107	63	3,509	2,759	.....	.....
Totals	555	494	298	237	69	152	188	105	70,205	92,765	21,414,878	20,595,136

Arkansas

	Completions 1925	Completions 1924	Producers 1925	Producers 1924	Gas Wells 1925	Gas Wells 1924	Failures 1925	Failures 1924	Initial Production 1925	Initial Production 1924	Annual Production 1925	Annual Production 1924
Bradley	1	..	1	..	..	..	..	..	12	.....	.....	.....
El Dorado	9	20	5	16	..	..	4	4	285	1,910	3,198,905	4,674,873
Irma	17	16	15	10	..	1	2	5	1,720	1,635	514,072	320,309
Smackover	1631	1345	1323	1185	107	38	201	122	1,382,003	245,862	74,383,376	40,610,416
Stephens	11	53	10	51	1	..	..	2	135	1,408	621,347	874,944
Wildcats	102	78	..	..	..	..	102	78	.....	.....	.....	.....
Totals	1771	1512	1354	1262	108	39	309	211	1,384,155	250,815	78,717,700	46,480,542

California

Field—	Completions 1925	Completions 1924	Producers 1925	Producers 1924	Gas Wells 1925	Gas Wells 1924	Failures 1925	Failures 1924	Initial Production 1925	Initial Production 1924	Annual Production 1925	Annual Production 1924
Athens-Rosecrans	190	18	179	17	1	..	10	1	132,335	14,753	7,391,456	628,847
Bandini	2	..	..	..	..	..	2	...	.....	.....	.....	.....
Brea-Richfield	26	13	24	6	..	..	2	7	13,963	1,876	4,258,973	4,443,548
Caruthers	1	..	..	..	..	..	1	...	.....	.....	.....	.....
Cat Canyon	1	..	1	..	..	..	...	...	200	.....	.....	.....
Claremont	1	..	..	..	..	..	1	...	.....	.....	.....	.....
Coalinga	..	42	..	12	..	..	...	30	.....	760	7,811,886	10,134,725
Comanche Point	2	..	..	..	..	..	2	...	.....	.....	.....	.....
Compton	..	1	..	1	..	..	...	...	.....	1,547	.....	.....
Coyote	3	3	3	3	..	..	...	...	740	2,175	7,188,569	5,716,479
Culver City	1	..	..	..	..	..	1	...	.....	.....	.....	.....
Cypress	1	..	..	..	..	..	1	...	.....	.....	.....	.....
Dominguez	50	47	47	30	..	..	3	17	46,952	41,749	13,449,723	6,813,489
Elk Hills	12	52	10	47	..	..	2	5	3,035	15,515	11,833,366	13,685,686
Fullerton	..	3	..	2	..	..	...	1	.....	339	4,490,298	4,125,141
Hawthorne	1	..	..	..	..	..	1	...	.....	.....	.....	.....
Hermosa	1	..	..	..	..	..	1	...	.....	.....	.....	.....
Homer	1	..	1	..	..	..	...	...	15	.....	.....	.....
Hovey Hills	7	..	7	..	..	..	...	...	1,295	.....	.....	.....
Huntington Beach	69	86	68	54	..	..	1	32	16,069	10,002	15,861,954	17,547,916
Inglewood	195	2	183	1	..	..	12	1	204,828	165	19,029,742	405
Jacalitos Dome	1	..	..	..	..	..	1	...	.....	.....	.....	.....
Kern River	8	10	5	10	..	..	3	...	575	268	5,951,217	6,780,977
Kettleman Hills	1	..	..	..	..	..	1	...	.....	.....	.....	.....
Keystone	1	..	..	..	..	..	1	...	.....	.....	.....	.....
La Habra	1	..	1	..	..	..	...	...	100	.....	.....	.....
La Mirada	4	..	1	..	..	..	3	...	252	.....	.....	.....
Long Beach	139	262	136	192	..	..	3	70	49,888	114,025	40,116,683	60,219,650
Los Angeles	1	117	1	..	..	..	...	117	1,535	.....	630,813	907,418
Lost Hills	1	18	1	..	..	..	...	18	100	.....	1,736,960	1,527,878
McKittrick	8	11	6	2	..	..	2	9	915	50	2,096,736	2,092,940
Midway	117	196	107	176	..	..	10	20	55,052	47,738	37,391,003	37,584,084
Montebello	19	8	18	3	..	..	1	5	12,793	452	6,895,949	6,214,762
Monterey	3	..	3	..	..	..	...	...	388	.....	.....	.....
Newport	8	..	2	..	..	..	6	...	140	.....	31,014	.....
Palms	1	..	..	..	..	..	1	...	.....	.....	.....	.....
Plaza Del Rey	1	..	..	..	..	..	1	...	.....	.....	.....	.....
Raisin City	2	..	..	..	..	..	2	...	.....	.....	.....	.....
Rideout Heights	3	..	1	..	..	..	2	...	88	.....	.....	.....
Rio Bravo	1	..	..	..	..	..	1	...	.....	.....	.....	.....
San Erindo District	3	..	..	..	..	..	3	...	.....	.....	.....	.....
San Luis Obispo	1	..	..	..	..	..	1	...	.....	.....	.....	.....
Santa Barbara	8	..	6	..	..	..	2	...	1,025	.....	.....	.....
Santa Clara	1	..	..	..	..	..	1	...	.....	.....	.....	.....
Santa Fe Springs	2	113	2	75	..	..	...	38	400	21,562	136,547,247	26,449,535
Seal Beach	2	..	..	..	..	..	2	...	.....	.....	.....	3,100
Signal Hill	1	..	1	..	..	..	...	...	85	.....	.....	.....
Summerland	..	..	..	..	..	..	...	...	.....	.....	48,213	.....
Torrance	178	531	175	511	..	..	3	20	17,441	166,145	13,298,212	17,527,908
Tulare	2	..	..	..	..	..	2	...	.....	.....	.....	.....
Ventura-Newhall	36	37	33	17	..	..	3	20	53,785	7,574	9,003,751	4,049,533
Weed Patch	1	..	..	..	..	..	1	...	.....	.....	.....	.....
Wheeler Ridge	12	8	8	6	..	..	4	2	882	1,284	346,364	345,427
Whittier	3	2	3	..	..	..	...	2	305	.....	741,090	767,805
Totals	1134	1640	1033	1165	1	..	100	475	615,181	447,979	231,768,982	230,536,303

Texas

Field—	Completions 1925	Completions 1924	Producers 1925	Producers 1924	Gas Wells 1925	Gas Wells 1924	Failures 1925	Failures 1924	Initial Production 1925	Initial Production 1924	Annual Production 1925	Annual Production 1924
Archer County	1505	1413	930	942	....	....	575	471	90,912	151,691	13,578,085	10,869,051
Barbers Hill	...	1	....	1	....	....	...	...	.....	1,000	46,712	72,437
Batson	58	76	47	64	1	....	10	12	11,210	5,885	545,567	541,687
Baylor County	28	....	14	....	....	....	14	...	715	....	44,420	.....
Big Creek	36	13	10	8	1	....	25	5	6,415	3,827	329,096	298,999
Blue Ridge	10	10	6	8	....	....	4	2	10,325	6,510	302,607	317,603
Boling	2	....	1	....	....	....	1	...	10,000	....	10,500	.....
Brown County	149	40	105	28	....	....	44	12	8,355	700	760,285	193,750
Big Lake	80	17	64	12	....	....	16	5	99,853	17,815	8,981,545	1,078,790
Burkburnett	132	155	89	84	....	....	43	71	8,637	3,825	5,206,550	7,109,190
Callahan Counay	101	9	73	4	....	....	28	5	8,820	9	1,285,215	90,650
Coleman County	18	9	11	2	....	3	7	4	148	21	60,199	45,310
Crockett County	1	....	1	....	....	....	...	...	25	....	3,320	.....
Currie	9	....	3	....	....	....	6	...	1,880	....	481,975	.....
Damon Mound	...	2	....	2	....	....	...	...	....	100	419,011	544,676
Dayton	...	....	....	....	....	.....	...	...	....	....	6,508	27,451
Eastland	164	155	96	92	....	....	68	63	5,054	5,990	3,710,990	2,627,475
Electra	380	373	249	248	....	....	131	125	10,509	19,914	6,294,455	7,332,990
Goose Creek	79	112	61	90	3	....	15	22	14,732	18,259	3,661,098	4,020,264

(Continued on page 108.)

"CENTRAL" LINE PIPE

For the past sixteen years we have been manufacturing Standard Butt Welded Pipe and its quality has become well and favorably known.

We have now completed our new Lap Weld Mill and are in position to furnish promptly Line Pipe in sizes 8-inch and smaller.

We are specialists in the manufacture of Pipe and the quality of "CENTRAL" Line Pipe will be up to the same high standard we have heretofore maintained on "CENTRAL" Standard Pipe.

Your inquiries are respectfully solicited.

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General Offices **First National Bank Building**

Pittsburgh, Pa.

Representatives in the Oil Fields

Mid-Continent
ALLEN, SPROULL & ALLEN,
Burk Burnett Building,
Fort Worth, Texas

California
E. C. SAUL,
Monadnock Bldg.,
San Francisco, California

High Island	11	....	4	....	....	....	7	...	2,300	....	148,256	19,141
Hull	175	144	154	112	4	....	17	32	121,970	90,980	7,183,796	7,286,670
Humble	...	4	....	2	....	....	...	2	....	4,200	1,751,720	2,244,795
Jack County	...	....	....	....	....	....	...	...	....	....	8,755	10,930
K-M-A and Iowa Park	217	229	129	146	....	....	88	83	9,443	14,588	1,742,690	1,388,510
Luling	14	93	14	91	....	....	...	2	2,541	150,300	9,706,346	10,210,396
Lytton Springs	181	....	172	....	1	....	8	...	79,862	....	2,570,709	.....
Marion County	5	....	3	....	2	....	...	...	370	....	.....	.....
Markham	...	1	....	1	....	....	...	...	....	2,000	34,336	69,745
Mexia	5	128	1	100	3	....	1	28	200	58,187	7,087,615	15,614,955
Mitchell County	36	28	33	26	....	....	3	2	3,590	2,460	798,895	461,105
Mirando	81	84	71	73	10	2	...	9	15,215	25,320	3,487,618	1,965,215
Misc. S. Texas	11	....	9	....	2	....	...	...	2,725	....	288,685	218,439
Montague County	49	....	34	....	....	....	15	...	1,581	....	111,265	.....
Moran-Shackelford	86	24	41	16	....	....	45	8	3,383	1,793	1,084,675	1,267,500
Nacogdoches	...	....	....	....	....	....	...	...	....	....	11,746	37,920
Orange	120	121	95	96	5	....	20	25	72,417	54,853	5,023,620	4,182,342
Palo Pinto County	28	60	7	24	....	....	21	36	417	840	228,000	322,605
Panola County	27	....	1	....	23	....	3	...	20	....	.....	.....
Panhandle	59	20	51	17	....	....	8	3	10,085	2,400	1,240,375	207,030
Petrolia-Clay Co.	36	35	12	12	....	....	24	23	430	158	147,680	119,095
Pierce Junction	15	4	7	1	....	....	8	3	8,755	500	292,356	163,316
Powell	170	262	138	198	....	....	32	64	9,011	161,997	17,582,055	33,500,525
Richland	28	....	15	....	1	....	12	...	1,495	....	2,037,095	.....
Saratoga	31	35	19	24	....	....	12	11	1,628	455	587,507	544,910
Scurry County	2	1	2	1	....	....	...	...	55	75	19,000	8,255
Sour Lake	53	49	40	30	....	....	13	19	3,032	1,225	1,585,054	1,650,148
South Liberty	196	....	158	....	....	....	38	...	130,324	....	4,551,290	.....
South Vernon-Wilbarger	304	6	247	5	....	....	57	1	49,603	5,400	3,189,720	271,255
Spindle Top	47	38	32	31	....	....	15	1	2,683	1,883	428,873	364,763
Somerset	...	....	....	....	....	....	...	...	....	....	1,115,626	1,023,157
Stephens County	213	209	121	136	....	....	92	73	33,767	25,645	5,729,035	7,129,230
Throckmorton Co.	4	....	1	....	....	....	3	...	153	....	44,355	.....
Thrall	...	....	....	....	....	....	...	...	....	....	16,935	24,930
Waskom	70	....	....	....	64	....	6	...	....	....	.....	.....
West Columbia	26	24	14	19	1	....	11	5	406	16,640	4,230,115	4,964,503
Wortham	429	....	338	....	....	....	91	...	413,685	....	16,838,150	.....
Young County	575	9	299	8	....	....	276	1	46,310	52,850	3,432,320	598,300
Wildcats	489	217	70	53	5	2	414	162	17,677	5,695	.....	.....
Totals	6545	4261	4092	2842	126	7	2327	1412	1,332,723	916,931	150,010,406	133,613,985

TAYLOR BOILERS

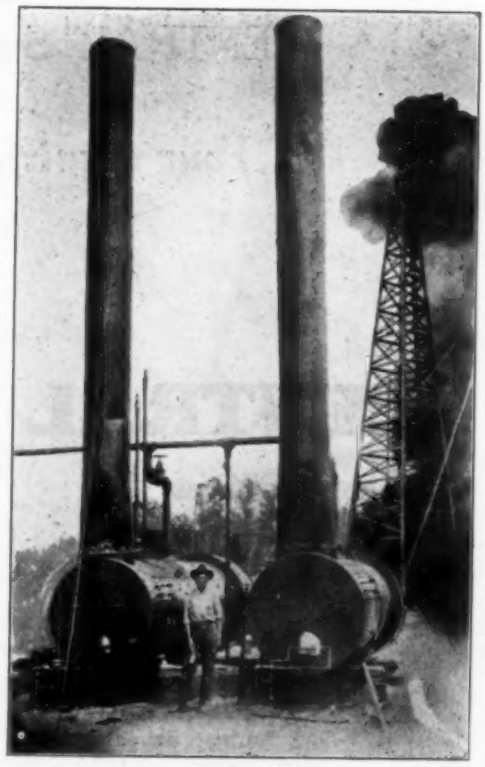
FOR EVERY PURPOSE

A RETURN TUBULAR TYPE
PORTABLE OIL COUNTRY BOILER.
28 FEET OF FLAME TRAVEL.
ECONOMICAL—SAFE—EFFICIENT.
NO STAYBOLTS TO LEAK.
NO CROWN SHEET TO COLLAPSE.
(NO FLAT SURFACES AT ALL)
A. S. M. E. CODE FOR 150 OR 200
POUNDS WORKING PRESSURE.

A Product of the

Coatesville Boiler Works

Mid-Continent Sales Office:
604 American Exchange Bank Building,
DALLAS, TEXAS



"TAYLOR BOILERS IN USE BY SUN OIL COMPANY IN ARKANSAS. AUTHORIZED."

Say you saw it in The OIL WEEKLY

Does Better Swabbing Interest You?

If you were convinced that a certain swab would OUTWEAR others from 50% to 100% you would certainly give it preference. This is only one of many outstanding features of the new Simplex Super-Swab, now ready for your consideration. Its introduction sets a higher standard of swab performance. Based upon fundamental engineering principles, it will give you infinitely greater service. Its design is such that overloading is forever impossible; consequently, costly fishing jobs are eliminated. Because of the fact that it can be run to the very bottom of the casing, it perfoms the function of agitating and likewise will serve as an efficient perforation cleaner. Yet, we haven't enumerated ALL of its super features. Shall we send you descriptive literature?

DEMAND A SIMPLEX. ORDER THRU YOUR SUPPLY HOUSE.

Fully Patented

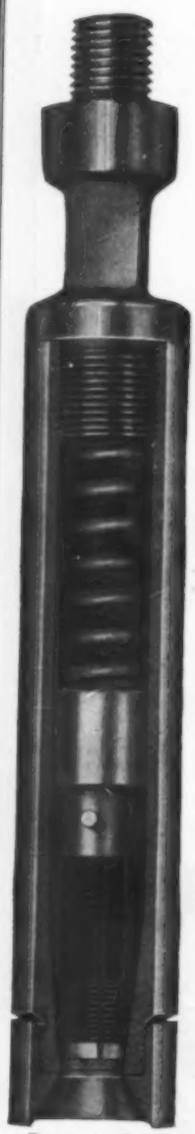
Simplex Equipment Company

629 S. Spring St., Los Angeles.

Simplex Super-Swab

The O. W. Combination Rod Socket

This is the tool that will take the grief out of your sucker rod fishing jobs. We absolutely guarantee to do this.



Standard Sucker Rod Pin

Has only one set of slips. And they are long enough to allow the broken rod to enter far enough to insure gripping.

Special Tempered Steel Spring

A Steel plug that carries the three slips by means of three steel pins pressed into the plug

Slips are special heat treated and guaranteed not to break

Bowls or Guide Noses threaded to fit this end

Patent applied for

The O. W. Combination Rod Socket will catch any rod from 5/8-inch to 7/8-inch without changing slips.

It can be run in 2, 2½ and 3-inch tubing by simply changing the bowl or guide nose on the lower end.

Only one bowl furnished with each socket.

Manufactured and Sold by

C. A. Winston
P. O. Box 17
Bowden, Okla.

J. W. Oberbeck
4333 St. Louis Ave.
St. Louis, Mo.

Oklahoma Production for 1925 and 1924 by Fields

Fields—	1925	1924
Braman	2,728,814	.....
Bristow	15,580,131	19,472,727
Burbank	19,742,784	30,290,796
Cromwell	12,096,503	9,525,695
Cushing	8,208,019	9,397,011
Davenport	633,485	.....
Duncan-Walters	478,520	3,233,941
Garber	6,220,930	.....
Gilcrease-Papoose	7,775,391	3,000,950
Healdton	695,775	5,140,552
Hewitt	5,750,493	7,653,262
Okmulgee	8,499,645	8,741,674
Osage (Outside Burbank)	12,684,797	14,885,445
Otoe	2,578,937	.....
Stroud	1,296,953	3,158,407
Tonkawa	23,249,322	22,208,704
Thomas	1,571,596	.....
Wewoka	4,480,624	3,292,198
Others	33,678,856	30,197,101
Totals	167,951,575	170,180,463

Oklahoma

County—	Completions 1925	Completions 1924	Producers 1925	Producers 1924	Gas Wells 1925	Gas Wells 1924	Failures 1925	Failures 1924	Initial Prod. 1925	Initial Prod. 1924
Alfalfa	3	1	..	..	..	..	3	1	.....	.....
Atoka	2	..	..	..	..	..	2	..	.....	.....
Beckham	5	29	1	5	..	2	4	22	15	517
Bryan	1	..	..	..	..	..	1	..	.....	.....
Burbank	103	..	98	..	..	..	5	..	33,421	.....
Caddo	7	20	4	13	..	2	3	5	155	1,285
Carter	213	337	151	263	5	20	57	54	15,706	45,353
Cleveland	1	..	..	..	..	..	1	..	.....	.....
Comanche	10	3	4	..	..	1	6	2	148	.....
Cotton	12	13	..	..	2	3	10	10	.....	.....
Craig	1	..	..	..	..	..	1	..	.....	.....
Creek	469	526	264	354	46	33	159	139	45,187	106,368
Custer	1	1	..	..	..	..	1	1	.....	.....
Dewey	1	1	..	..	..	..	1	1	.....	.....
Ellis	1	..	..	..	..	..	1	..	.....	.....
Garfield	153	34	126	25	3	1	24	8	128,578	1,070
Garvin	26	17	17	11	..	1	9	5	2,628	578
Grady	49	28	2	..	30	12	17	16	55	.....
Grant	9	13	2	..	2	..	5	13	75	.....
Greer	4	..	..	..	..	..	4	..	.....	.....
Haskell	4	..	..	..	..	..	4	..	.....	.....
Hughes	264	95	139	72	38	2	87	21	60,507	42,325
Jackson	2	1	..	..	..	..	2	1	.....	.....
Jefferson	46	22	26	6	2	3	18	13	7,317	537
Johnston	1	1	1	..	..	..	..	1	20	.....
Kay	286	151	171	109	28	13	87	29	169,140	140,931
Kiowa	3	3	1	..	..	..	2	3	10	.....
Kingfisher	2	2	..	..	..	..	2	2	.....	.....
Le Flore	1	..	..	..	..	..	1	..	.....	.....
Lincoln	115	86	88	73	2	2	25	11	39,768	64,774
Logan	4	2	..	..	..	..	4	2	.....	.....
Love	3	3	..	..	..	..	3	3	.....	.....
Major	1	..	..	..	..	..	1	..	.....	.....
Marshall	5	4	2	..	..	..	3	4	49	.....
Mayes	1	..	..	..	..	..	1	..	.....	.....
McIntosh	8	12	1	1	2	2	5	9	75	10
Muskogee	39	47	9	12	4	7	26	28	195	1,715
Noble	66	91	36	66	6	5	24	20	29,713	27,642
Nowata	3	..	..	..	..	..	3	..	.....	.....
Okfuskee	253	80	123	39	28	8	102	33	41,286	13,683
Okmulgee	512	316	260	144	50	32	202	140	42,522	17,706
Oklahoma	1	24	1	16	..	..	..	8	70	1,942
Osage	670	1,118	433	924	49	58	188	136	44,869	409,442
Pawnee	169	109	96	76	9	4	64	29	19,107	18,808
Payne	46	23	22	10	10	2	14	11	6,862	1,343
Pittsburg	3	..	..	..	..	..	3	..	.....	.....
Pontotoc	18	11	5	5	1	2	12	4	115	323
Pottawatomie	4	2	1	1	..	..	3	1	30	8
Rogers	6	1	3	1	2	..	1	..	110	20
Seminole	332	388	241	344	15	17	76	27	111,452	305,822
Sequoyah	3	1	..	..	..	..	3	1	.....	.....
Stephens	202	141	91	70	36	25	75	46	4,500	1,913
Tillman	5	17	..	11	..	2	5	4	.....	662
Tulsa	232	249	117	124	28	30	87	95	9,133	18,083
Wagoner	92	100	21	40	14	12	57	48	530	2,040
Washita	1	2	..	..	..	..	1	2	.....	.....
Washington	4	2	..	1	..	..	4	1	.....	20
Woods	1	..	..	..	..	..	1	..	.....	.....
Totals	4,479	4,139	2,557	2,817	412	301	1,510	1,021	813,348	1,224,930

Kansas Production for 1925 and 1924 by Fields

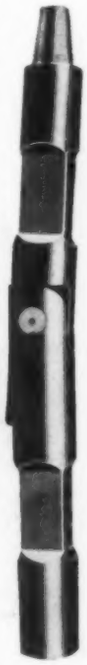
Fields—	1925	1924
Eldorado	5,257,313	6,120,096
Greenwood County	9,129,190	6,716,291
Elbing and Peabody	2,146,247	3,298,095
Fox-Bush	732,943	1,987,366
Florence and Covert	747,784	958,194
Blankenship	941,017	1,155,644

(Continued on page 115.)

IN the development of Hinderliter patented Tools, the Hinderliter Tool Company has been an important factor in reducing the investment and adding to the safety of present day drilling operations.

The genuine patented tools, manufactured exclusively by the Hinderliter Tool Company, are available only at Hinderliter Stores, located in all important Oil Fields.

Eccentric Combination Socket

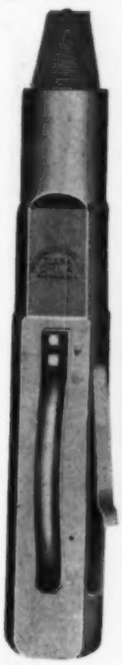


Kick-off Tool

Casing Collar Ripper

Bell Socket Spear

Two-in-One Tool Hook



Jar Up and Jar Down Ripper

Slip Ring Socket

Eccentric Grab

Mildren Tubing Support

"THE BIGGEST LITTLE TOOL COMPANY IN THE OIL COUNTRY"

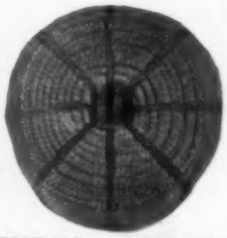
HINDERLITER TOOL COMPANY

Manufacturers of and Specialists in Drilling and Fishing Tools

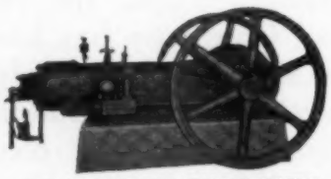
TULSA, OKLAHOMA

BRANCHES IN PRINCIPAL OIL FIELDS

Hinderliter Joint Breaker



TUBBS CORDAGE



FRANKLIN ENGINES

AMERICAN STEEL WIRE

ALL THESE AND MORE

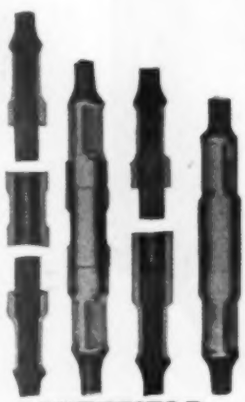
make up a part of the big system that is the INTERNATIONAL SUPPLY COMPANY.

We go all over the country to select the best of tools and equipment and bring them to you through our supply stations in the oil territory.

We keep on hand at all times a stock large enough to insure you a wide range of selection, no matter what your needs may be.

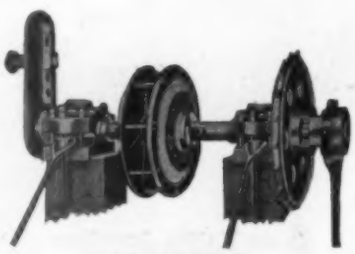
You will find any demand you may make supplied with unfailing promptness. It is for this purpose we have built up our big chain of supply stores. You can find one in every section of the Mid-Continent Territory.

Tell us your troubles and needs. We'll put an end to both.

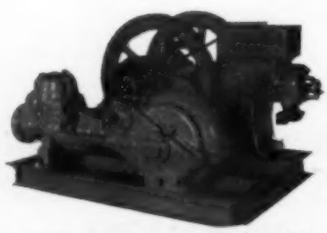


SHEFFIELD SUCKER RODS

BURT SWAB



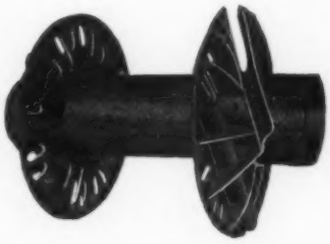
RIG IRONS



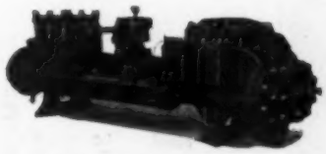
HERCULES ENGINE

NEW YORK RUBBER BELT

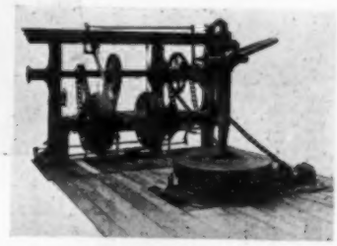
INTERNATIONAL SUPPLY CO.
TULSA OKLA.



BELL'S FLANGE



GARDNER PUMPS



LUCEY ROTARY

DRILLING TOOLS

International Supply Company is starting the year 1926 with even better facilities for giving you the quick, efficient service that is necessary in the Oil Industry.

Affiliations with a dozen new nationally known manufacturers of oil equipment during the past year have widened the field of selection that we can offer you in 1926.

New branch stores at Blackwell and Garber, Oklahoma; Moline and Winfield, Kansas; Panhandle and Best, Texas; and Artesia, New Mexico have extended our operations into several new sections of the Oil Territory.

We are keeping up with the growth of the Oil Industry.

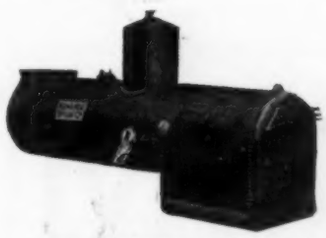
YOUNGSTOWN PIPE

BRADEN HEADS

Gasoline Equipment

We carry selected lines of refinery equipment, each chosen for its record of performance in the big refineries of the Mid-Continent Territory.

This equipment is standard for all the leading refineries. No matter what you may need in this line, we are prepared to supply it.

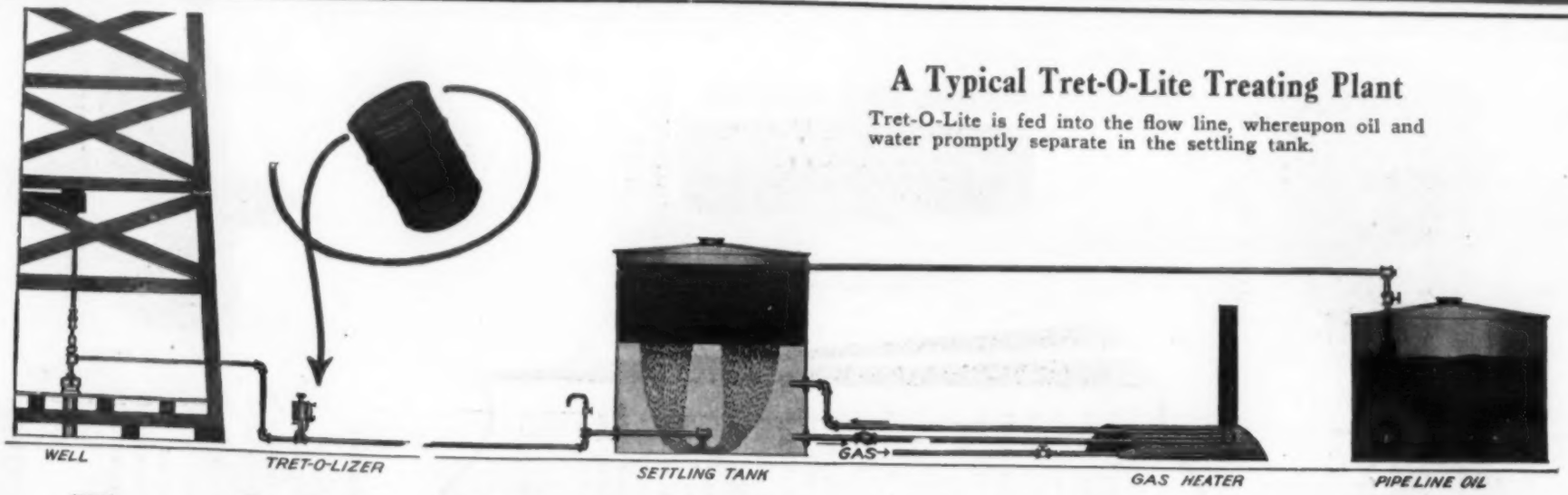


KEWANEE BOILERS

INTERNATIONAL SUPPLY CO.
TULSA OKLA.

Say you saw it in The OIL WEEKLY

Say you saw it in The OIL WEEKLY



A Typical Tret-O-Lite Treating Plant

Tret-O-Lite is fed into the flow line, whereupon oil and water promptly separate in the settling tank.

Tret-O-Lite Will Not Injure Your Pipe or Tanks

Interior walls of your pipe lines and storage tanks will be found absolutely unaffected by the continued use of Tret-O-Lite over a period of years. It contains no mineral acid or other corrosive ingredient that could injure metal in any way.

Tanks and pipe already on the lease may be used for treating your cut oil and tank bottoms, without affecting their availability for other purposes later.

Tret-O-Lite is rapidly coming into universal use. In many territories it is the ONLY successful method for treating petroleum emulsions. It is simple, rapid, economical, THOROUGH. A personal call by our nearest representative will not obligate you.

Process Patented

WM. S. BARNICKEL & COMPANY

St. Louis, Mo.

Offices and Plant: Webster Groves, St. Louis County, Mo.

Tret-O-lite

Reg. U. S. Pat. Off

	1925	1924
Augusta and Douglas	1,321,700	1,232,303
Russell	193,967	.....
Rainbow Bend	4,591,494	1,199,119
Other Fields	9,436,101	5,441,373
Totals	34,497,756	28,351,001

Kansas

County—	Completions 1925	Completions 1924	Producers 1925	Producers 1924	Gas Wells 1925	Gas Wells 1924	Failures 1925	Failures 1924	Initial Prod. 1925	Initial Prod. 1924
Barton	2	3	..	..	..	..	2	3	.....	.....
Butler	130	33	64	10	1	1	65	22	5,884	462
Chase	14	7	8	..	..	..	6	7	1,155	.....
Chautauqua	30	10	9	3	5	..	16	7	858	1,000
Clay	1	2	..	..	..	..	1	2	.....	.....
Coffey	9	9	5	5	..	..	4	4	90	230
Commanche	1	..	..	..	..	..	1	..	.....	.....
Cowley	313	136	206	76	13	20	94	40	91,090	31,531
Dickinson	1	..	1	..	..	..	..	..	240	.....
Elk	120	67	60	20	23	27	37	20	3,562	1,292
Ellis	1	..	..	..	..	..	1	..	.....	.....
Franklin	..	1	..	..	..	1	..	..	.....	.....
Greenwood	668	358	472	271	4	10	192	77	72,568	36,573
Hamilton	1	..	..	..	..	..	1	..	.....	.....
Harvey	5	5	..	1	..	..	5	4	.....	450
Kingman	1	1	..	..	..	..	1	1	.....	.....
Lincoln	2	2	..	..	..	..	2	2	.....	.....
Lyon	20	13	9	1	..	..	11	12	535	5
Marion	16	14	5	7	1	..	10	7	484	1,155
McPhearson	3	..	..	..	..	..	3	..	.....	.....
Mitchell	1	..	..	..	..	..	1	..	.....	.....
Montgomery	34	17	5	14	1	..	28	3	655	8,892
Osage	1	3	..	..	..	..	1	3	.....	.....
Osborne	..	1	..	..	..	..	..	1	.....	.....
Phillips	1	..	..	..	..	..	1	..	.....	.....
Reno	..	2	..	..	..	..	..	2	.....	.....
Republic	..	1	..	..	..	..	..	1	.....	.....
Rice	2	4	1	2	..	..	1	2	210	240
Riley	1	..	..	7	..	..	1	..	.....	.....
Rooks	2	..	..	..	..	..	2	..	.....	.....
Russell	53	14	43	..	1	..	9	7	9,806	1,380
Sedgwick	9	1	..	..	..	..	9	1	.....	.....
Seward	2	..	..	..	1	..	1	..	.....	.....
Sumner	33	8	7	..	1	..	25	8	726	.....
Shawnee	..	1	..	..	..	..	..	1	.....	.....
Woodson	45	6	22	4	1	..	22	2	540	140
Trego	2	1	..	..	..	..	2	1	.....	.....
Washington	..	1	..	..	..	..	..	1	.....	.....
Waubaunsee	..	1	..	..	..	..	..	1	.....	.....
Wilson	13	..	..	..	1	..	12	..	.....	.....
Totals	1,537	722	917	421	53	59	567	242	188,403	83,350

Mountain States

Wyoming

Field—	Completions 1925	Completions 1924	Producers 1925	Producers 1924	Gas Wells 1925	Gas Wells 1924	Failures 1925	Failures 1924	Initial Prod. 1925	Initial Prod. 1924
Baxter Basin	1	9	..	..	..	2	1	7	.....	.....
Bell Springs	1	..	..	..	..	..	1	..	.....	.....
Big Horn Basin	..	22	..	11	..	1	..	10	.....	210
Big Muddy	4	4	4	3	..	..	..	1	140	350
Billy Creek	1	..	..	..	..	..	1	..	.....	.....
Black Mountain	2	..	2	..	..	..	..	..	800	.....
Buffalo Anticline	1	..	..	..	..	..	1	..	.....	.....
Buffalo Basin	1	..	..	..	..	..	1	..	.....	.....
Carbon County	..	13	..	17	..	6	..	11	.....	2,950
Dry Piney	1	..	..	..	..	..	1	..	.....	.....
Dugout Creek	1	..	..	..	..	..	1	..	.....	.....
Eight Mile Lake	1	..	..	..	..	..	1	..	.....	.....
Elk Basin	..	13	..	11	..	..	..	2	.....	1,780
Enos Creek	1	..	..	..	..	..	1	..	.....	.....
Ferris	1	..	..	..	1	..	..	..	.....	.....
Foote Anticline	1	..	..	..	..	..	1	..	.....	.....
Fremont County	..	21	..	12	..	..	..	9	.....	385
Garland	1	..	..	..	..	..	1	..	.....	.....
Grass Creek	4	11	3	9	..	..	1	2	150	1,755
Hamilton Dome	1	..	1	..	..	..	..	..	106	.....
Horse Creek	1	..	..	..	..	..	1	..	.....	.....
Lance Creek	2	6	1	5	1	1	..	..	1,100	2,550
Lost Soldier	14	..	8	..	1	..	5	..	2,620	.....

(Continued on page 116.)

BACK OFF

That Stuck Pipe With Edwards Reversing Tool

Coupling for drill stem connection rotates to right

Hinged wings when turned to right open and anchor to casing—causing

The lower part to operate to the left, recovering stuck or twisted off pipe and casing

Can be released at will. Will operate with strain on pipe. Has wide range of adjustment. Makes left-handed pipe unnecessary. Successful operations prove statements.

Get H-E Tools

At your supply store, or write, phone, or wire.

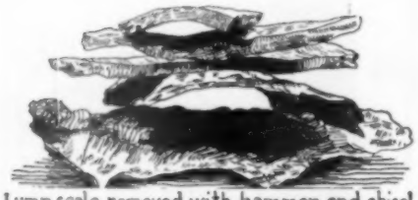
HOUSTON ENGINEERS, Inc.

Phone Preston 1927
Night, Taylor 1996
Postoffice Box 276
HOUSTON, TEXAS

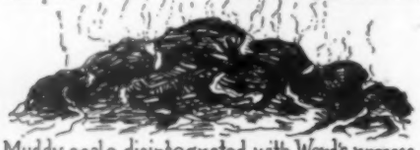
Patented—Patents Pending

Ward

Boiler Scale REMOVER



Lump scale removed with hammer and chisel.



Muddy scale disintegrated with Ward's process.

Loosens the scale and prevents new scale forming, due to the fact that it is composed of aluminum neutralized with alkali which decomposes hard formations of incrusting salts commonly found in the average field water.

WARD CHEMICAL CO.,

"Heavy Chemicals for the Oil Industry"

TULSA, OKLAHOMA

Competent refiner, with knowledge of the running of Eastern, Western and Southern crudes and various cracking plants, is desirous of connecting with a progressive company. Now employed but wants to advance." Box 253, care OIL WEEKLY.

WANTED

DRILLING CONTRACTOR

to put down test well in the west part of Deaf Smith County at Garcia Lake. For further particulars write Edward H. Blood, the Panhandle Land Man, Hereford, Texas.

Field—	Completions 1925	Completions 1924	Producers 1925	Producers 1924	Gas Wells 1925	Gas Wells 1924	Failures 1925	Failures 1924	Initial Prod. 1925	Initial Prod. 1924
Mahoney	6	..	..	..	4	..	2	..	.....	.....
Natrona County	..	10	..	2	..	..	..	8	.....	1,050
North Casper Creek	1	..	..	..	..	..	1	..	.....	.....
North Riverton	1	..	..	..	..	..	1	..	.....	.....
Notches Dome	1	..	1	..	..	..	..	..	300	.....
Oregon	2	..	..	..	1	..	1	..	.....	.....
Osage	1	57	1	45	..	..	..	12	10	1,050
Pilot Butte	1	..	..	..	..	..	1	..	.....	.....
Poison Spider	2	..	2	..	..	..	..	..	700	.....
Rex Lake Field	2	..	1	..	..	..	1	..	100	.....
Rock River	2	16	2	11	..	..	..	5	235	1,730
Sage Creek	3	..	..	..	..	..	3	..	.....	.....
Salt Creek	434	620	425	599	2	..	7	21	55,459	109,430
Sherard Dome	1	..	..	..	..	..	1	..	.....	.....
Simpson Ridge	6	..	4	..	..	..	2	..	335	.....
Steel Creek	1	..	..	..	..	..	1	..	.....	.....
St. Mary's	1	..	..	..	..	..	1	..	.....	.....
Sugar Creek	1	..	..	..	..	..	1	..	.....	.....
Teapot Dome	..	10	..	8	..	..	..	2	.....	800
Tisdale Dome	1	..	..	..	..	..	1	..	.....	.....
Wertz	1	..	..	..	..	..	1	..	.....	.....
Miscellaneous	..	115	..	41	..	5	..	69	.....	4,830
Totals	508	938	455	764	10	15	43	159	62,055	128,120

New Mexico

Field—	Completions 1925	Completions 1924	Producers 1925	Producers 1924	Gas Wells 1925	Gas Wells 1924	Failures 1925	Failures 1924	Initial Prod. 1925	Initial Prod. 1924
Artesia	32	..	32	..	..	..	..	..	8,095	.....
Bloomfield Mesa	3	..	3	..	..	..	..	..	88	.....
Eddy County	13	..	11	..	1	..	1	..	2,915	.....
Hogback	1	..	1	..	..	..	..	..	1.135	.....
Rattlesnake Dome	5	..	5	..	..	..	..	..	2,280	.....
San Juan County	2	..	1	..	..	..	1	..	50	.....
Table Mesa	2	..	2	..	..	..	..	..	825	.....
Total	58	..	55	..	1	..	2	..	15,388	.....

Utah

Field—	Completions 1925	Completions 1924	Producers 1925	Producers 1924	Gas Wells 1925	Gas Wells 1924	Failures 1925	Failures 1924	Initial Prod. 1925	Initial Prod. 1924
Clay Basin	1	..	..	..	..	..	1	..	....	.....

Montana

Field—	Completions 1925	Completions 1924	Producers 1925	Producers 1924	Gas Wells 1925	Gas Wells 1924	Failures 1925	Failures 1924	Initial Prod. 1925	Initial Prod. 1924
Beaver Creek	1	..	..	..	..	..	1	..	....	....
Big Lake	3	..	1	..	1	..	1	..	200	....
Big Otter Dome	1	..	..	..	..	..	1	..	....	....
Cat Creek	11	53	11	32	..	..	..	21	388	2,580
Devil's Basin	1	..	1	..	..	..	..	..	75	....
Kevin-Sunburst	247	125	208	81	8	..	31	45	78,670	25,825
Shawmut	1	..	..	..	..	..	1	..	....	....
Springdale	1	..	..	..	..	..	1	..	....	....
Miscellaneous	1	131	1	19	..	8	..	108	50	5,025
Totals	267	310	222	132	9	8	36	170	79,838	32,890

Colorado

Field—	Completions 1925	Completions 1924	Producers 1925	Producers 1924	Gas Wells 1925	Gas Wells 1924	Failures 1925	Failures 1924	Initial Prod. 1925	Initial Prod. 1924
Beaver Creek	1	..	..	..	..	..	1	..	....	....
Berthoud	1	..	..	..	..	..	1	..	....	....
Florence	5	..	4	..	..	..	1	..	215	....
Fort Collins	2	..	2	..	..	..	..	..	650	....
Fremont County	1	..	1	..	..	..	..	..	25	....
Iles	4	..	1	..	..	..	3	..	576	....
Lafayette	1	..	..	..	..	..	1	..	....	....
La Plata County	1	..	..	..	..	..	1	..	....	....
Mancos	1	..	..	..	..	..	1	..	....	....
Mesa County	1	..	..	..	..	..	1	..	....	....
Moffatt Dome	2	..	1	..	..	..	1	..	1,000	....
Rio Blanco County	1	..	..	..	..	..	1	..	....	....
Sage Creek Dome	1	..	..	..	..	..	1	..	....	....
San Juan	1	..	1	..	..	..	..	..	50	....
Slater Dome	1	..	..	..	..	..	1	..	....	....
Thornburg Dome	2	..	..	..	..	..	2	..	....	....
Wellington	5	..	3	..	..	..	2	..	2,000	....
Yuma	2	..	..	..	..	..	2	..	....	....
Miscellaneous	2	..	1	..	..	..	1	..	100	....
Total	35	..	14	..	..	..	21	..	4,616	....

Invitational

to members and friends of

American Petroleum Institute

OIL AGE

extends a cordial invitation to witness a demonstration of

The Fernholtz Oil-Coke Briquette Press

In the perfection of the Fernholtz Briquetting Process, the Oil Refining Industry takes one of the greatest steps forward in its history. Because of the interest already manifested and in order that all visitors at the forthcoming Convention, January 19, 20 and 21, may have the opportunity of witnessing the actual operation of The Process on a commercial basis, Oil Age has arranged this very important demonstration . . . . .

Cards of invitation may be secured by mail or at the Oil Age Convention Headquarters at the Biltmore Hotel, Los Angeles.

See the January issue of The Oil Age, for article "Oil-Coke Briquettes—The Perfect Fuel." Copy will be mailed upon request.

THE OIL AGE PUBLISHING CO.

Insurance Exchange Building, Los Angeles

Say you saw it in The OIL WEEKLY

Deeper Sands Feature Rocky Mountain Development

Better operating methods have big part in increasing output of Wyoming and Montana

By Brad Mills
Staff Representative

VIEWING the advancement in the Rocky Mountain region during 1925 from a practical standpoint, developments in general stand out as the most significant in several years. While no fields of major importance were uncovered, several small oil and gas fields were added to those already producing.

In summarizing the achievements of the year, the new fields actually discovered probably are overshadowed by deeper discoveries in old fields, where sands which may more than double the life and productiveness were uncovered by deeper drilling. Particularly does this apply in Wyoming and Montana, where old fields of major importance were given new life. It is not yet possible to estimate in every case the importance of these deeper discoveries, but it is safe to say that in some cases the deeper sands may produce even more oil than the shallower formations.

In grouping all the states in this region into one unit, the total number of completions stands out as the most impressive feature of the year's development. Approximately 1675 wells were completed during the year in the various states. Of this number, about 500 were dry holes. This record number of completions was brought about by the fact that all the states showed increased activity over 1924. The ratio of the number of dry holes to the total number of completions is remarkable. Only 30 per cent of the wells completed were dry. This may be accounted for by observing that the greatest activity was in the proven fields.

Initial production, far from always being a true barometer of operations, was comparatively large during the year, when about 230,000 barrels were recorded. This gives the 1100 oil wells completed an average initial production of slightly more than 200 barrels each. This new production was considerably more than enough to offset the natural decline in old production.

Production Increased

Pipe line runs at the beginning of the year were hovering around the 85,000-barrel mark. This figure gradually increased until it reached 112,000 barrels early in the fall. Several infuences were responsible for this large increase. The electrification of the Salt Creek field, extensive drilling in other states, particularly in Montana, and the keen demand for crude in this section were the chief causes for the greatly increased output. Pipe line runs at the end of the year actually were slightly smaller than during November. This was brought about by several reasons.

Although operations in Wyoming were no more important than in some of the other states, a summary of the operations in this state during the past year should come first, due to its key position in this territory. Wyoming was the original large producer in the Rocky Mountains and long has produced more than three times as much crude as all the other states combined.

The Salt Creek field, center of operations in the state, did not gain a great amount in production for the year, but this fact was more than offset by several other important developments. The electrification program carried out in the field by the Midwest Refining Company was so huge that its steadying influence has been felt in the field all the year. Nearly 1000 wells are now being pumped electrically. The Midwest interests operate the largest single electrical unit used in any one field in the world.

Another important development in the field was the consistency with which the Lakota or deep sand wells came in. This important sand was not discovered in the field during the year, but the greater number of the wells now producing from this horizon were finished during 1925. First and second sand wells stopped flowing in great numbers and were put on the pump during the year. The Lakota sand wells generally have flowed, and early in the year some of these came in with very large initial production.

The removal of the differential, which has long existed between the Salt Creek field and the Mid-Continent fields, contributed greatly to the activity in the field during the year. Crude from this field is now bringing Mid-Continent prices, so keen is the demand for light oil in this immediate territory. Refinery demands must be met and the Salt Creek field offers the best solution to the problem.

More than 400 wells were completed in the field during the year. Of this number, practically all were producers. Initial production was not as sensational as in former years, but the wells completed are producing consistently.

New Light Oil Area

The Producers and Refiners Corporation opened up a new light oil field at Crooks Gap, about 30 miles northwest of the Little Lost Soldier field and in the vicinity of Rawlins. The well was completed with a production of 50 barrels. Another test is being drilled on the structure by the company. This organization dominates this part of the state and has been unusually successful in its wildcatting activities in this region.

The Union Oil Company of California discovered a new heavy oil field on the Lake Creek structure, 30 miles east of Thermopolis. The well was good for more than 500 barrels and is one of the largest black oil wells in the state. This company has done considerable pioneering in the state. Two or three other wells will be drilled on the structure. This small field is located in a territory producing black oil almost exclusively.

One of the most important discoveries of the year, and one of which the outcome is not yet definitely known, was made during December, when the Marland Oil Company of Colorado encountered light oil in its well on the Wilson Dome. This structure is located 40 miles northwest of Casper and 10 miles north of Powder River. The top of the sand in this structure apparently carried water, but the bottom of the sand or another sand immediately under the water sand carries light oil. A test of the well has not been made on account of the water, but estimates place the production well above 500 barrels daily. Ordinarily oil found in this part of the state is heavy. The structure is not a large one, covering not more than five square miles, it is thought.

The Lance Creek field furnished some surprises during the year. This field originally was classed as one of small producers. Later the wells were drilled deeper and the production jumped enormously. The Ohio Oil Company completed two wells during the latter part of the year which produced more than 1000 barrels each. The crude in this field is very high grade and commands a good price. Some of the operators in the field deepened their wells during the year and the production increased in almost every case. The pipe line runs from this field at the end were much higher than at the beginning of the year.

Lost Soldier Holds Up

The Lost Soldier field, second largest in the state, managed to keep its production well up to normal. The Prairie interests dominate the field. Several wells were completed during the year. The wells in this field usually fall off fast from their initial production. Several structures

~tankage

Gas Tight and Water Seal

THE time to consider your tankage needs is now—before hot weather begins. And to secure greatest conservation in oil stored we suggest the conversion of your wood roof tanks into either gas-tight or water-seal.

We are ideally equipped to handle all phases of tank work and will welcome an opportunity of going into your problems with you personally. We ask that you feel free to write us.

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Deep Well Pumps
Hoists of all kinds
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Descriptive literature and quotations will be furnished to those interested upon request.

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To Insure a Perfect Formation of the Cement When Cementing Off

The Baker Cement Plug is run in on the bailer or tools AFTER the cement has been dumped and BEFORE the casing is lowered. It seals the bottom of the casing when lowered, and the displacement as the casing goes down forces all the cement up and around the casing in a perfect formation. This simple device, when properly used, practically insures a perfect cement job. Write for complete descriptive folder.

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"Trustworthy" Engines

—for gasoline power. 15% less with natural gas. Lightest Heavy-Duty Engine made—Price is Right.

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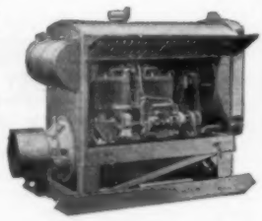


Climax Power Unit
Built in
4 Sizes
30 to 130 H. P.

immediately adjacent to this field furnished some small producers. Several gas wells also were drilled in this district.

In the old Pilot Butte field The Argo Oil Company discovered a deeper productive sand than any that had ever produced in this shallow structure. The company has had no end of trouble with the test and the possibilities of the discovery really have not been ascertained. The strike was made at about 2700 feet and the company has had trouble in correctly setting liner. Sand and sediment played consistently against the operators. The sand is not a thick one, but holds much for the future of the field.

Drilling operations in all other Wyoming fields during the year were somewhat perfunctory and furnished nothing sensational. All of the fields recorded a few completions but these were barely enough to maintain the normal production for the different fields.

Big Gain in Montana

Operations in Montana were very important during the year. In speaking of Montana during 1925, the Kevin-Sunburst field immediately takes the lead. This field furnished more than 90 per cent of all the activities in the state during the year. Starting out with a production of 3500 barrels daily, this remarkable field increased its pipe line runs more than 400 per cent by the first of December. The Ellis sand yielded producer after producer. Many of these wells came in with an initial production of from 2000 to 3000 barrels daily. Production from these large wells falls off rapidly, but the productive sand is so shallow the wells pay for themselves in a short time.

About 350 wells were completed in the field during the year. The increase in production was so great and the pipe line and storage capacity so small, the Illinois Pipe Line Company, principal carrier of the field, was taking only 40 per cent of the production at the end of the year. All available storage was full and the operators were forced to accept a prorate on their possible production.

The pipe line facilities of the field fell woefully by the wayside, when compared with the strides made by the producer. Plans were made during the year by some of the operators, whereby they could market their own oil in case the pipe line runs were prorated, but these failed to materialize. Very little oil was finding its way to market at the end of the year except that transported by the Illinois Pipe Line Company.

The ratio of dry holes drilled in this field was comparatively high, due to the tricky formations. The 100 per cent production of the field was close to 20,000 barrels daily at the end of the year.

The attention of the largest operators in the country was drawn to this field during the year, and many who had abandoned it returned to resume operations after large producers were brought in near the acreage they had abandoned. Early in the year drilling operations in

It's a Wilson

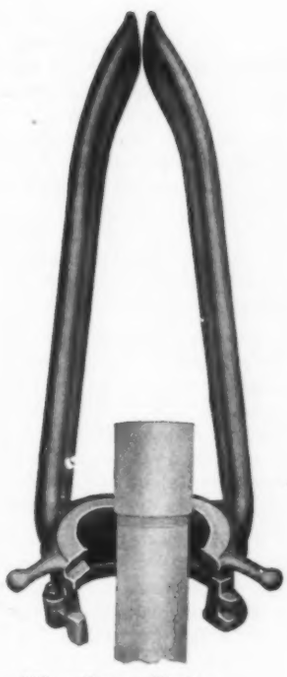
The family of Wilson Products

welcomes members of the

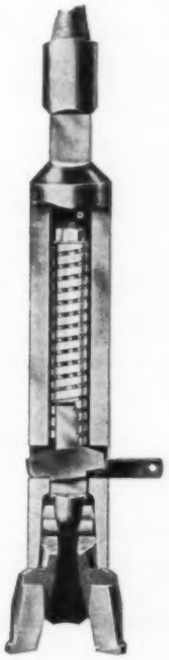
American Petroleum Institute

The latch string is out

Wilson Pump Valve

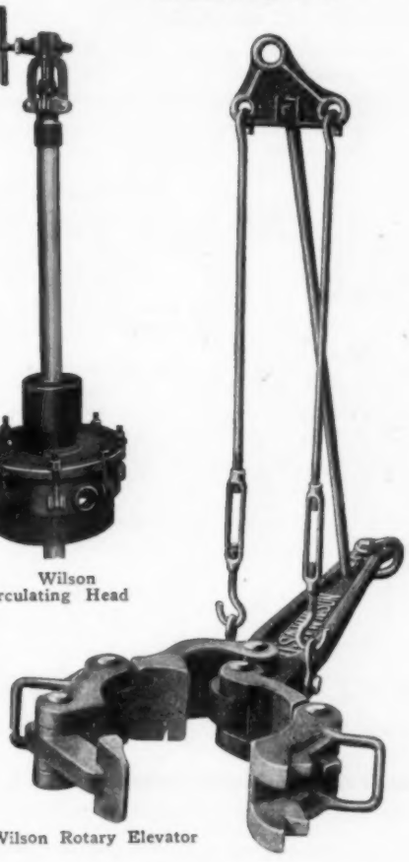


Wilson Rotary Elevator



Wilson Underreamer

Wilson Circulating Head



Wilson Rotary Elevator

Sales Offices:
Tulsa, Okla., 409 Atlas Life Bldg., Ft. Worth, Texas, 803 Dan Waggoner Bldg.

Wilson Oil Tools Corporation
DISTRIBUTORS FOR
Wilson & Willard
MANUFACTURING COMPANY
Factory and Distributor's Office It's a Wilson 2301 East Vernon Ave.
Los Angeles, Calif.

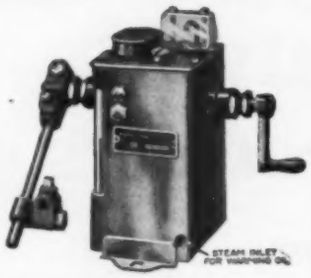
Sales Office:
530 West Building
Houston, Texas

Use "Manzel" Lubricators On Your Drilling Engines

They will save the engines and cut your oil bills 30 to 60%.

Feed clean, fresh oil to the cylinders just as it is needed—never too much or too little.

Require no attention, don't need to be turned on or shut off. Start, stop, speed up or slow down just as the engine does, and stop feeding oil the instant the engine is shut off.

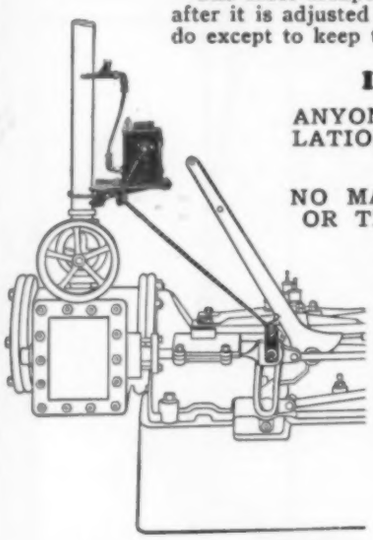


The "Manzel" Force Feed Lubricator

Lubricates drilling engines, mudhogs, air and gas compressors, pumps, etc., automatically and efficiently.

Day or night—winter or summer—it supplies oil regularly and in just the right quantity.

The most inexperienced helper can take care of it, for after it is adjusted to suit the engine, there is nothing to do except to keep the reservoir supplied with oil.



It's Easily Installed, too!

ANYONE CAN MAKE THE INSTALLATION—IN THE FIELD—IN LESS THAN HALF AN HOUR.

NO MACHINE WORK, PIPE FITTING OR THREAD CUTTING NECESSARY.

We furnish (when desired) special brackets and fittings for installing on Oil Well, Ajax, Warren, or other drilling engines, either single or twin type. In less than thirty minutes after you receive the "Manzel" Lubricator, it can be installed on your engine and your lubrication troubles will be over.

Sold by All Leading Supply Dealers

MANZEL BROTHERS COMPANY

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The Only Competitor of the

GAS LIFT

is a

Natural Flowing Well

PROTECTED BY A PROCESS PATENT (No. 1,102,152) NOT LIMITED TO ANY PARTICULAR FORM OF EQUIPMENT

Best results with the gas lift are obtained only after thorough engineering investigation of field conditions and with properly designed equipment

Licenses to operate under the patent are granted exclusively by

JONES-McLAUGHLIN, INC.

901-906 Wright-Callender Building Los Angeles, California

the field were expected to be on a small scale, but subsequent developments caused a major program to be carried out.

In the Cat Creek field very little activity was noted during the year. The Mid-West interests control this field. They have a steady production of about 3200 barrels daily and this seems to fill their needs at present. The cost of getting Cat Creek crude to outside market is high, and despite the high gravity of the crude, very few wells were drilled during the year. Pipe line runs held up remarkable well. The wells in this field seem to have a tendency to "hang on" consistently.

The Lake Basin field, practically abandoned a year ago by the Widwest Refining Company, holds more promise than even the operators themselves thought at the time of the withdrawal from the field. Other interests have acquired acreage and the well recently completed is an excellent producer. The first well drilled by the Midwest Refining Company was a small producer. Several other wells were drilled around the first one, but with little success. It is possible that the main pool has not been found.

Wildcatting Negligible

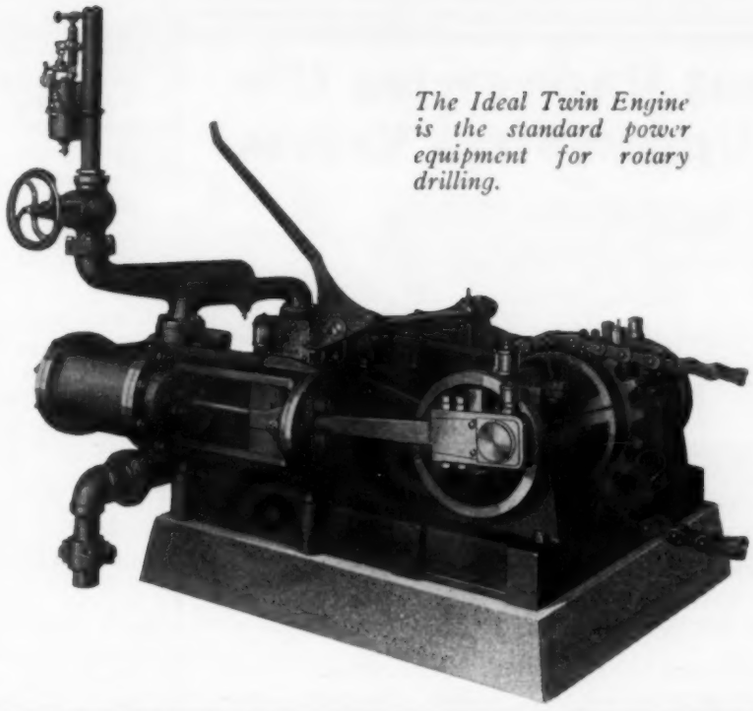
Wildcatting was in progress in almost every part of the state during the year, but little of importance was noted. Gas and small amounts of oil were found in various sections of the state, but generally these were negligible. A fairly good gas well was brought in north of the Kevin-Sunburst field by the St. Paul-Montana Oil Company. Several extensions of the Kevin-Sunburst field were made, but in reality they belonged to the field proper rather than separate fields.

Colorado activity, although not confined by any means to the proven fields, was more noticeable in the fields discovered prior to 1925 than on the wildcat structures. Pioneering was in evidence in every section of the state, but fortune did not smile plentifully upon the wildcatter in Colorado during the past year.

In the Fort Collins region, which includes the Wellington dome, the Union Oil Company of California and other operators drilled diligently all during the year and were rewarded with some good producers. Two or three good wells were completed by the Union on the Wellington structure, where the discovery gas well gradually changed to oil. Enough wells were drilled to give the operators an idea of the size of the structure as well as the possible recoverable oil. Some of the wells drilled nearer Fort Collins were disappointing because they did not have enough gas pressure to make them flow consistently. It was proven that wells ordinarily could not be pumped with uniform success because of the great depth of the producing sand.

Moffat Best in Colorado

The Moffat or Craig district, controlled jointly by the Texas Production Company and the Trans-Continental Oil Company,



The Ideal Twin Engine is the standard power equipment for rotary drilling.

The Test of an Engine Is What It Does for You

What we say about the Ideal Twin Drilling Engine has little weight. We have put the best we have into its design and manufacture, all our experience in building Ajax Engines for half a century. For the stories of its performance in the field go to the man who is using one. Then use one yourself and check up what it does for you with the best experience you have ever had before.

AJAX ENGINES

"Reg. U. S. Pat. Off."

Made by

AJAX IRON WORKS

Corry, Pa.

Distributed by

NATIONAL SUPPLY COMPANIES

In every oil field

AJAX

34149

To Prevent Unscrewing Use HOUGH Upper Steel Valves

Fig. No. 122.

Lower end of body drilled, slotted bottom secured by cotter pin. Has long thread on body above hexagon, with lock ring to hold crown secure. A very popular valve in many fields.

Fig. No. 124.

The body and bottom are one unit; cup rings and cups put on from top. Fishing neck on crown with hexagon lock nut to secure the body, seat frame and crown—perforated bottom.

Other special types designed specially to prevent trouble due to unscrewing. Carried in stock by your dealer. Complete catalogue of pumping specialties on written request.

The Charles N. Hough Mfg. Company
Franklin, Pennsylvania

Products that cut down your underground overhead

1926

A Prosperous Year for Oil Men

The OHIO CLEANER will aid you in getting your proper share of prosperity

May we send the information?

The Traction Machine Co.

North Baltimore, Ohio

stands out prominently as the most consistent producer in the state. During the year several good wells were completed on the dome. One of the wells came in with an initial production of more than 2000 barrels. Developments during the year proved the structure much larger than it was originally thought to be. Large stocks of equipment were being taken to the district at the end of the year.

The Midwest Refining Company ran oil from the Iles dome during 1925 for the the first time. A pipe line was built to connect with the Texas Production Company's line at Moffat. This is a small field and only two wells are producing. The sands in this field proved broken and the company was fortunate in saving the wells.

Among the largest gas wells completed in the United States were those brought in on the Rangely dome during the past year. This strictly gas structure carries a very high rock pressure and a well recently drilled became unmanageable, and is still blowing in the air. Plans for furnishing nearby cities with the gas were discussed but never worked out.

The Florence field, one of the oldest producing oil fields in the United States, and famed for the life of its wells, gradually climbed in production during the year and the pipe line runs from the field are averaging 400 barrels daily, the largest figure since 1916. This remarkable old field was extended several miles to the south during the year. The wells completed early in the year are still producing well up to their initial production. The Continental Oil Company is the largest producer in the field and operated a small refinery near the structure during the year.

The government, realizing the possibilities of the shale beds in Colorado, partially installed a modern retort to determine the cost of extracting the oil. Congress appropriated nearly $100,000 for the test. Little progress was made during the year by independent operators who hold leases on valuable shale reserves.

The first gas ever used in Colorado for domestic purposes was supplied to the people of Fort Collins by the Public Service Company. This utility completed its main from the Wellington structure to Fort Collins early in December. The same interests control the franchise for furnishing the city of Denver with gas, but no definite plans have been perfected for piping an adequate supply to the city. Considerable time was spent in attempting to work out plans for furnishing Denver, Salt Lake City and other large Rocky Mountain cities with gas, but the lack of an adequate supply and the great cost of building a 200-mile pipe line balked the plans.

New Mexico.

New Mexico, producer of the highest grade crude in the country, gave a good account of herself during the year. Op-

STAR

4 Cylinder Gasoline Motor
Super-Tractor
Drilling Machines

Reduce Cleaning-Out Costs One Half!

For economical cleaning-out work, Star Super Tractor Drilling Machines have no equal.

The superintendent of one large oil company reports that he can move his Star Super Tractor, rig up and clean out a well at the same cost it requires just to move and rig up a steam machine.

Another operator writes that everything considered, he can clean out a well with a star Gasoline Super Tractor for one-half what it costs to do it with a steam machine.

Mr. J. T. McMahon, General Superintendent of the Texas Company, writes: "Your Star No. 38ST has revolutionized many oil fields. It is far superior to any heretofore seen by me."

There are three sizes of Star 4-cylinder gasoline Super Tractors that amply cover all ordinary cleaning-out and drilling requirements.

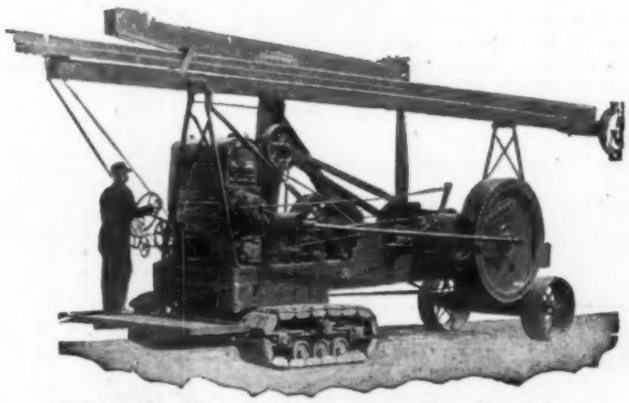
They operate equally well on natural gas or gasoline. Write for complete information and prices.

The Star Drilling Machine Company

Akron, Ohio, U. S. A.

Branches at Chanute, Kansas; Wichita Falls, Texas; Long Beach, California; Portland, Oregon

Export Office, 2 Rector St., New York City, U. S. A.



4-Cylinder Star Super-Tractor No. 38ST for Cleaning Out and Drilling

AMERICAN
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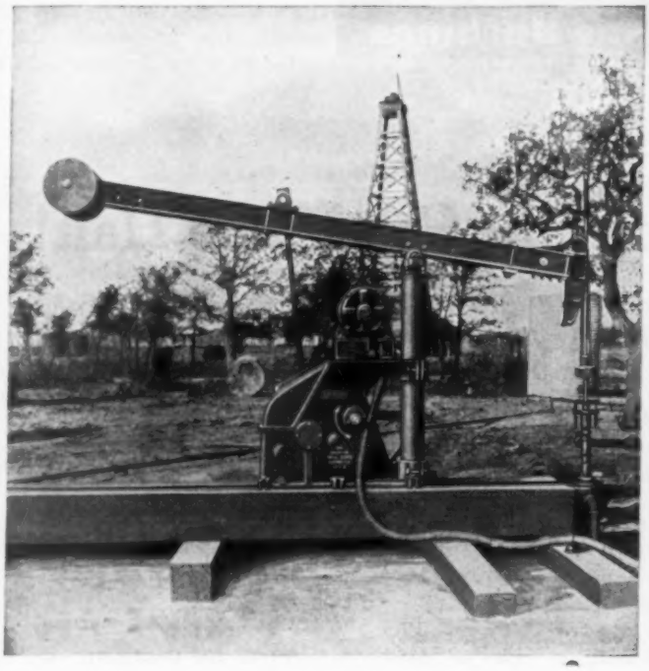


The New Oil Well Pumping Jack

The "American" Totally Enclosed Oil Well Pumping Jack has been designed in answer to the demand for the efficient pumping of individual oil wells.

American Jacks are made in three sizes—twelve-inch to fifteen-inch stroke, fifteen-inch to eighteen-inch stroke, and eighteen-inch to twenty-two-inch stroke. All gears are totally enclosed and run in a bath of oil which floods the bearings, insuring smooth operation and long life. The head proper may be disengaged from the cable and swung back from the walking beam, permitting the rods to be pulled without moving the jack itself. There are no screw mechanisms or adjustments necessary. No gears are exposed.

Compact, sturdy and economical in operation.

Ask for Bulletin 181

C. S. CARTER, Agent Box 1511, Tulsa, Okla.

GENERAL OFFICES AND WORKS - AURORA, ILL.
THE AMERICAN WELL WORKS
BRANCH OFFICES

erators who had been prone to ignore the possibilities of the state in former years were among those to stage a leasing campaign during 1925.

The Artesia field gradually climbed in production all through the year until the 4000-barrel mark was reached. A stable market has been found for the crude and pipe line facilities have kept pace with the production. About 75 wells were completed in the field during the year. Nearly all were producers.

A search was made throughout the northern part of the state for a low gravity crude to reduce the gravity of the oil found in the Artesia, Rattlesnake and Hogback fields. Very little heavy oil was found.

The Continental Oil Company opened up a producing sand near the Rattlesnake field at less than 1000 feet. The oil was saved by casing it off, and the test was continued. No pipe line runs have been made from the well. The well tested more than 1000 barrels of very high gravity oil.

In Utah the Midwest interests brought in a good oil well near Moab late in the year. The well has not been tested, but will make at least 500 barrels, according to conservative estimates. The new discovery is remotely located along the upper Colorado river. Some gas wells were completed early in the year on the Cisco fold, near the Colorado line, but they were of little value because of their location. Most of the drilling done during the year was along the eastern border of the state.

Arizona proved to be the freak oil state of the region. A 15-foot hole was drilled north of Clifton and crude rose in it. At first it was thought the oil was seeping from an old tank site, but this later proved erroneous. The discovery was bona fide and Arizona was added to the list of oil-producing states. Two or three similar wells were drilled and are producing. An extensive drilling program was not inaugurated, however.

Amerada Opens Texas Office

Fort Worth, Texas.—The Amerada Petroleum Corporation has created a district office for Texas on the twelfth floor of the F. & M. Bank Building, Ft. Worth, to take an active part in the future wildcat operations over the state. H. E. Marsh, who was formerly attached to the Mid-Continent headquarters of Amerada at Tulsa, has been placed in charge of the land department for Texas, and F. B. Plummer, formerly with Rycade and Roxana, is manager of the geological department, with A. E. Olden and J. C. Palmer as assistants. The Rycade Oil Corporation, which is affiliated with the Amerada, has considerable oil production in the Gulf Coast region, and will continue to maintain state headquarters at Houston, with its activities centering on the development of proven leases.

LIGHTNING
OIL FIELD SUPPLIES
PUMPING POWERS, JACKS, STUFFING BOXES, ETC.

Lightning Wire Line Beam Hanger

Handles a Stroke Seven Feet Long

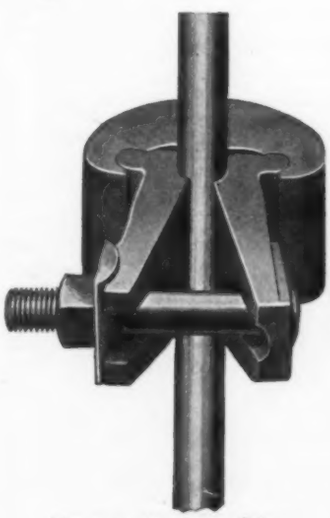
All Steel Grip used on Wire Line Hanger

The Lightning V Swing With Adjustable Legs

Made for heavy work

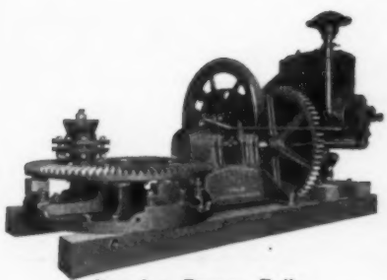
Rod and Casing Hooks

Lightning Rotor



Type C All Steel Grip

Type T. S. Stuffing Box
The real lubricator



Pumping Powers Built in Three Sizes

KANSAS CITY HAY PRESS CO.
KANSAS CITY, MO.

Say you saw it in The OIL WEEKLY

Making a Commodity of Loyalty

Marland Oil Company protects the welfare of its employes to the end that they will stand by their concern

By Grady Triplett,
Staff Representative

WITH the Marland Oil Company loyalty is a commodity. It is not a physical property to be wrapped in a package and laid on a warehouse shelf. There is no price tag on it. Neither is it carried on the inventory list, with a value in dollars and cents opposite.

Still loyalty is a commodity by authority of the dictionary, for one of its definitions is "an economic good." And if loyalty is not a product of this class with the Marland Company, there is not a commodity anywhere in the assets of the concern.

Loyalty is further a commodity in that money is spent to acquire it. This money goes for physical examination and care of employes and their families. It goes for health and life insurance for workers. It goes into educational advantages. All these are for the employes at no cost to them.

Where loyalty differs from other commodities is that the Marland Company makes no effort to sell it. Loyalty is held. There can not be too much of it.

How It Is Won

This winning of loyalty comes through the operation of the employment scheme of the Marland Oil Company. When a man is hired, the company begins doing things for him. It continues to do these things for the worker to the end that he will give better service to the company and that is loyalty.

The employment scheme has its other advantages. Men physically fit for work, do their work with greater speed. When not bothered about loss of wages if sick, they give better service. Knowing the company will assist in buying a home, a man is prone to work harder to the end that he may become a home owner.

On the score of these advantages, the methods the Marland Company uses are considered a good investment. But over all this is the fact that these methods win the loyalty of men and in that the methods pay dividends of the sort not to be put down in figures.

No better evidence of the winning of loyalty can be seen than by following the plan of the Marland Company in its hiring and keeping men.

Physical Examinations

The physical examination is required of each man before he becomes a worker for the Marland Company. A clinic is maintained at the Ponca City home office for providing these examinations. Then wherever the concern has occasion to hire men at a distance from Ponca City local physicians are retained for this work.

By one of these methods each man, when selected for duty, is given an examination as shown on the forms herewith. First he gets a perforated card, which is an order for the examination. This he must take to the physician designated for the examination.

The examination is both dental and medical. From this double examination the physician decides what sort of work the person is capable of doing. The sort of work is checked on the lower part of the perforated card taken there by the propspective worker. This he must present to his foreman when going on duty.

Where a man is not considered in

PHYSICAL EXAMINATION
Marland Refining Co., Ponca City, Okla.

Date employed_____ No._____

Name_____ Address_____
Department_____ Work_____
Appearance_____ Weight_____ Height_____
Age_____ Muscular condition_____ Teeth_____
Heart_____ Lungs_____
right Right
Eyes Left_____ Ears Left_____ Throat_____
Hernia_____ Veins_____
Deformities_____
Venerial Diseases_____

Urin (Alb._____ (Sugar_____ (S. G._____ (Reaction_____

Physically fit for ( ) Any Work ( ) Moderate " ( ) Only light"

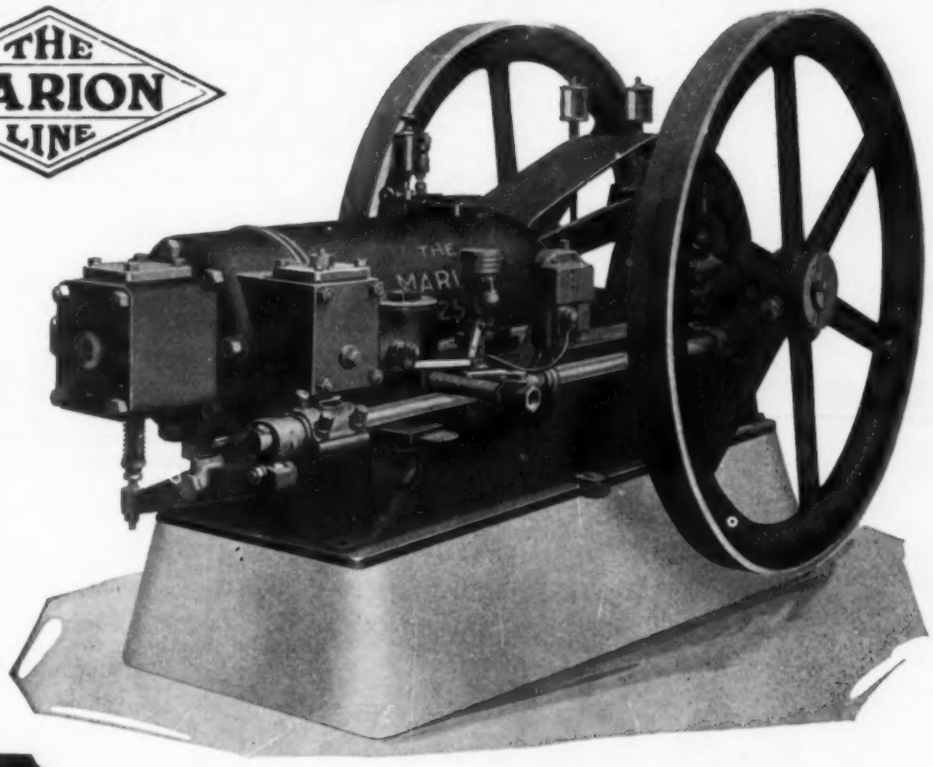
REMARKS

_____

Date examined_____ Signed_____

Statistics *are* Interesting—

THE MARION LINE



They are especially interesting and informative when given out by seasoned oil men who have had opportunity to observe and use all kinds of drilling and pumping equipment in operation on their leases. Below are extracts from letters taken at random from our files. Names furnished on request.

Marion Gas Engines 10-25-35 H. P.

"We have five Marion 25 H. P. Gas Engines as well as other makes and we consider the Marion in a class by themselves: one of the Marion Engines ran a hundred and ninty-two days and nights, without stopping, which we consider an excellent recommendation."

Marion Hi-Test Sucker Rods (Name Registered). May 9th, 1924

"On a well 3400 feet deep with 3-inch tubing, a string of ⅞-inch rods with 1½-inch pin was run on March 29th, 1922 and have never parted. These rods handle about 600 barrels of water and oil a day and the very best ever received from rods was from 20 to 30 days."

"The Hi-Test Rods we put in last March have been pumping steadily since that time and never had a break. The wells have been going twenty-four hours a day."

December 1st, 1923.

"On about August 6th, 1923, we purchased a string of 2200 feet of Marion 11/16-inch Hi-Test Sucker Rods.

"We are very glad . . . to state, that the rods were placed in the well about or on the 6th of August, 1923, and from that date we have not been shut down for one minute from the want of rods needing attention, such as breaking and parting.

"We do highly recommend the Marion Hi-Test Sucker Rods."

Marionhill Pitman (Patent Pending).

"I have been using one of your Marionhill Steel Pitmans for about two and one-half months and it is the best pitman I have ever used.

"It is easy to operate, leaves rig in perfect alignment, and takes all jar off sucker rods. In my opinion it is as near fool-proof as one could be made.

"I take pleasure in recommending this pitman."

The bulletins listed below will give you detailed information concerning The Marion Line of Oil Field Machinery and will be sent without obligation, on request.

No. 198 Marion Steel Bull Wheels.
No. 199 Marion Tubular Steel Derricks.
No. 200 Irish Pulling Machines.
No. 202 Marion Peerless Reversible Clutch.
No. 203 Marion Gas Engines.
No. 205 Marion Band Wheel Powers.
No. 206 Marion Sand Proof Working Barrel.
No. 214 Marion Hi-Test Sucker Rods.
No. 217 Marionhill Pitmans

Marion Machine Foundry & Supply Company

Marion, Indiana, U. S. A.

proper physical condition for work, he is not given a card, which means he can not have work or that he must correct some defects before going to work.

The First Stroke

It is right here that the Marland Company begins winning loyalty. Scores of men are not physically fit for work, until they undergo operations or medical treatment. The Marland Company agrees to provide either or both of these without cost to the man, provided he desires to join the company.

The Ponca City clinic is equipped for major and minor operations and the men in charge are employed for performing these. The actual operations cost the prospective worker nothing. He must, however, pay his own hospital costs.

Executives of the company consider the willingness of a man to undergo a perts to keep a man in physical trim corrective operation or a line of medical treatment as the best evidence of loyalty on the part of the man. When he agrees to either of these, his willingness becomes evidence of the loyalty the company is seeking.

Ever At It

After a man has recovered from whatever the medical officials may require, he is ready for duty but he is not through with the clinic. A record is kept of his case and he may be ordered back for examinations as frequently as the physicians deem necessary. It is up to the clinic and its exonce he has been put to work.

MARLAND REFINING COMPANY

ORDER FOR MEDICAL OR DENTAL EXAMINATION

Date.....

Name.....

Address.....

Work or Trade.....

Department.....

Foreman.....

Date of examination.....

Name.....

Address.....

Work.....

CHECK

Physically fit for.....( ) Any Work

( ) Medium Work

( ) Only Light Work

Signed.....M.D.

Signed.....D.D.S.

Present this card to Foreman

Each employe of the company is required to come to the clinic at least once a year for a physical examination. This applies whether the employe has been ill during the year or not. The requirement is purely protective and does not cost the employe any money.

Most industrial clinics are maintained for treatment of cases where men are injured in their work. But that is just a minor part of the duties of the Marland clinic. It exists to take care of cases that come up regardless of working hours.

Where an emloye can come to the clinic for treatment its facilities are free, regardless of how the man came about his illness or his accident.

No Cost

Take the case of a man suffering from bad teeth. He may not be able to work. Still if he can come to the clinic, his dental work will be done at no cost to him and that will be continued until he is ready for duty again. A man may suffer an automobile accident while off duty but the clinic is ready to dress his wounds, provided he can be brought there for it.

Some of the work of the clinic, of course, involves attention on account of accidents in the refinery or the leases nearby. These cases are handled in accordance with the compensation laws of Oklahoma.

But the other activities of the company in behalf of its workers are not included in compensation statutes.

Eliminates all dangers of twist-offs and unscrewing of rods or tubing.

The RATIGAN Rod Rotator with Shock Absorber

A big improvement in design, construction and RESULTS, this Ratigan Rod Rotator with the Ratigan Shock Absorber is working its way into the list of standard equipment on hundreds of wells. It is accomplishing better results with reduced effort, eliminating costly accidents and expensive delays, and materially lowering production costs as a whole. Equipped with Timken Roller Bearings. Heavy construction throughout gives ample strength for all service with a large factor of safety. If there are any of these appliances in service near you, look them over. If not, write us for further particulars.

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FRICK-REID SUPPLY COMPANY
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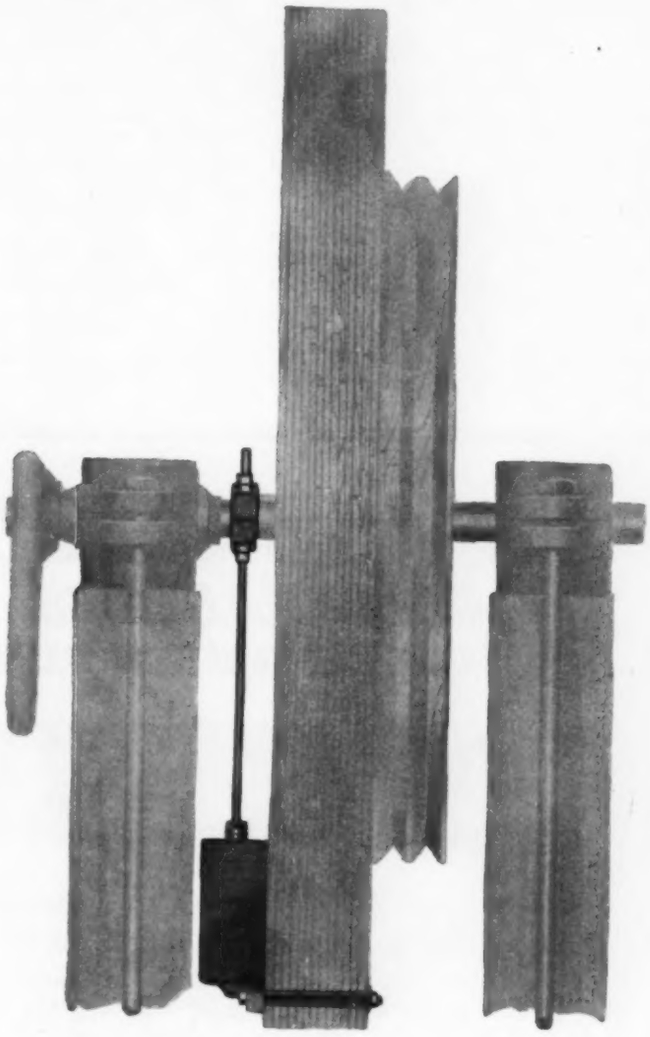
Don't Counterbalance

Equalize

The O. C. S. Equalizer is a Band-wheel Counterbalance and it **Equalizes** the load on the belt and Equalizes the speed up and down of the rods.



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These are solely the effort of the company.

Students of labor long have held that the chief concern of a worker is his fear of losing pay while off duty. Employes of the Marland Company have no such fear. Health and accident insurance remove that fear.

When a man goes to work, he is insured against sickness and loss of time from an accident. There have been instances where men have been compelled to leave work two days after undertaking it but health insurance provided them with money equal to three-fourths of their wages for all the time lost from illness.

This, together with the possibility of having free medical attention at the company clinic, gives the worker assurance of coming through his illness without incurring debt that will hang over him for many months.

All this insurance is free to the worker.

In addition the company furnishes life insurance on all of its employes. This is in addition to the requirements of the state compensation laws. After a man has been employed for 90 days, his life is insured for $1,000. At the end of one year the amount becomes $2,000, increasing $1000 each year until the total becomes $5000.

This insurance is a gift from the company to those dependent on a worker who may lose his life. On that score the company reserves the right to pay the insurance money as desired. When a death comes, officials of the company investigate the needs of the family and on this determine how the insurance policy shall be paid.

Another activity of the Marland company is that of assisting employees to buy homes. This is done through cooperation with a building and loan association in Ponca City. Arrangement between the two concerns are such that a man may begin buying a home without having a substantial sum for his first payment.

Where an employe is deserving, the Marland Company will back him in a home venture, allowing him to assume the obligations of a home by starting with just monthly payments. The Marland Company is responsible in the transaction until 10 per cent of the obligation has been paid, when the venture becomes one between the individual and the financing concern.

Sky's the Limit

All these things are somewhat in the line of routine. Scores of opportunities come from the company to step beyond the paths of these provisions to help an employe along. And the policy of the concern is to back an employe to the limit, provided he has been loyal to the company during his time of employment.

Examples of this sort are not numerous, but men have developed tuberculosis while working for the company. Some of these men are in western hospitals today at the expense of the company. They will be kept there until they recover or give way before the ravages of the disease, for their records with the company spell loyalty and the concern will not cease to perform its duties in that light.

None of these things are done in the light of charity. They cost great sums of money, but these expenditures are looked on as good investments. With the introduction of physical examinations, medical treatment and insurance, the lost time from accidents and illness has become less for the company.

Before these activities were undertaken, it was common for each man to lost as much as 10 days' time per year throughout the organization. Now lost time is down to less than two days per year for each employe. Other figures are available showing reduced loss of time for accidents.

But there are items where figures can not tell the story. It is the contention of Marland officials having this work in charge that men do more work per day, when their minds are free from thought of what might happen to their families in case of illness or death. Such fears are removed through insurance.

And over the whole of the plan is the fact that the manner in which the Marland Oil Company treats its employes breeds a loyalty that is worth far more than all the money that is put into it.

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COLD PROCESS
SLOTTED SCREEN PIPE

Designed to Afford the Operator a Superior Screen Pipe at a Lower Cost

Every operation in the manufacture of Baash-Ross screen pipe is carried out with the idea of retaining the highest percentage of its original pulling and bending strength. That the desired result is achieved is evidenced by the unusual success of this pipe in service.

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Slots are machine-cut from the outside of the pipe by our special cold process, which preserves the original texture of the steel in the pipe.

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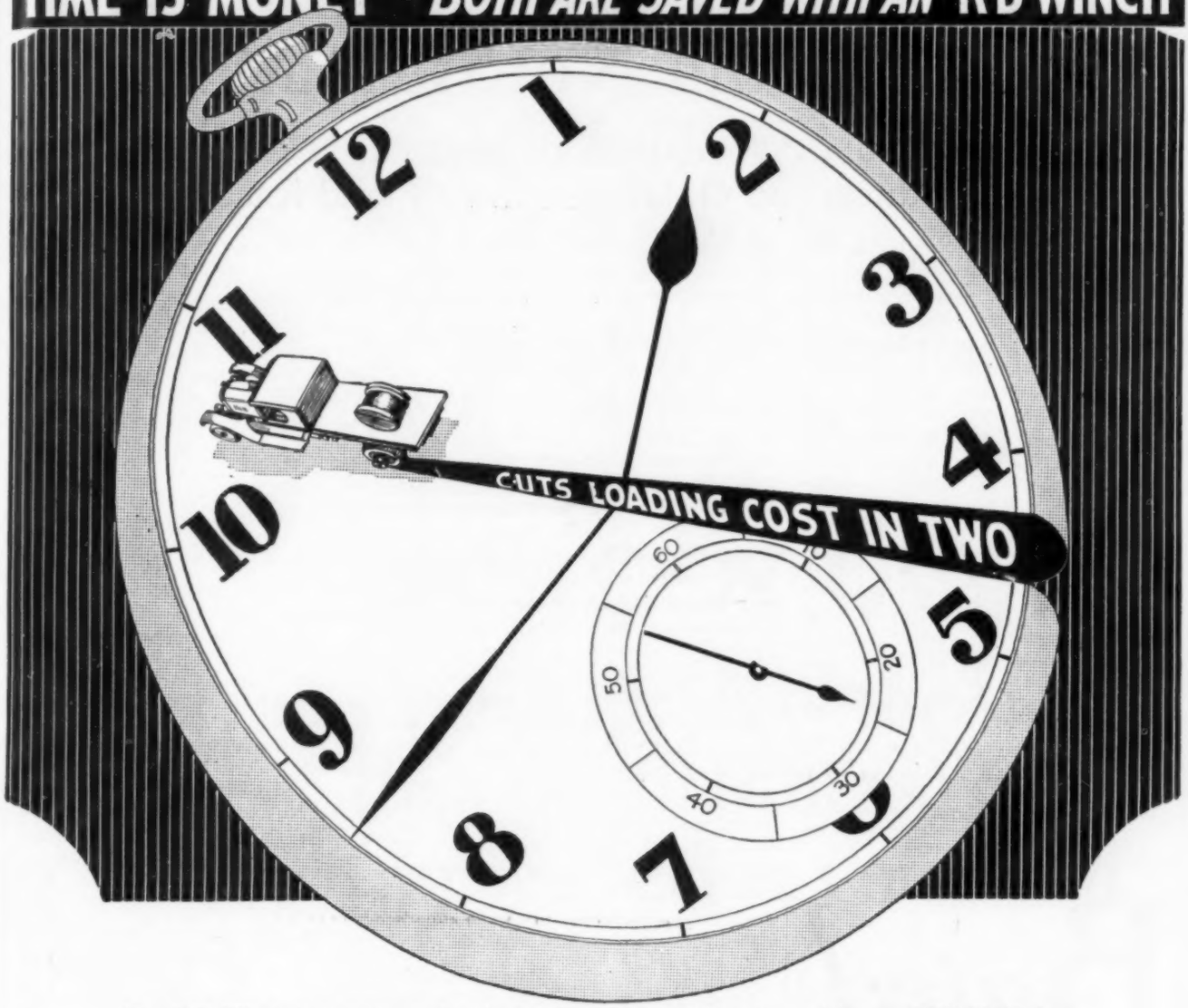

The R-B Winch is a money-maker for truck owners because it is a time-saver. The principles of DESIGN, OPERATION and LOCATION ON THE TRUCK WHEEL which have made the R-B Winch popular in so many industries, make its use a triple economy.

The R-B Winch loads quicker, because of greater line speed, without decrease in power and it performs the heaviest loading duties with ease; it cuts down the labor required by other winches to a minimum; ONE MAN, in most cases, can load an R-B Winch equipped truck; the location of the R-B Winch leaves the entire bed space of the truck available at all times for capacity loads.

Truck owners, whose loading costs are more than operators of R-B Winches pay, ARE PAYING TOO MUCH. The R-B Winch is the lowest priced power winch, first and last, on the market. A demonstration will tell you why.

THE BRADEN STEEL & WINCH CO.

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THE R-B WINCH

Say you saw it in The OIL WEEKLY

Federal Court Rules Indian Land Oil Should Not Be Taxed

Pennsylvania case may mean return of large sum to producers on Oklahoma Indian land leases

Tulsa, Oklahoma.—That oil operators need not pay a tax on income derived from the development of Indian lands was in substance the opinion of Judge W. H. H. Thomson, Pittsburgh, Pennsylvania, judge of a U. S. district court in Pennsylvania, in deciding in favor of the Braden estate which had sought to recover $850,000 paid as an income tax on the profits accruing from leases in the Osage Nation of Oklahoma.

This decision, if sustained by the higher court will have a far reaching effect, it is believed. Operators have been paying an income tax without protest on the profits derived from oil and gas development of the Osage.

*District Court of the United States Western District of Pennsylvania.

The Colonial Trust Company, Executor of the Will of Glenn T. Braden, deceased, vs. C. G. Lewellyn, former Collector of Internal Revenue for 23d District of Pennsylvania. No. 3271 Law.

The Colonial Trust Company, Executor of the Will of Glenn T. Braiden, deceased, vs. D. B. Heiner, Collector of Internal Revenue for the 23rd District of Pennsylvania. No. 3272 Law.

The wells drilled on the Indian lands by the lessees produce around 80,000 barrels of oil daily. The Burbank field, Oklahoma's largest producing area, with 46,000 barrels of production daily is situated in the Osage Nation.

Both lay and legal opinion varies as to what the final outcome will be if the Braden case is carried to the supreme court. This is the first time a case of this nature has been passed on by a federal court. The suit was filed six months ago by the law firm of Allen and Underwood for the Colonial Trust Company, executor of the will of the late Glenn T. Braden, against C. G. Lewellyn and successor, Collectors of Internal Revenue for the 23rd District of Pennsylvania for the recovery of the money which was collected between 1917 and 1921 by Lewellyn as a tax on income derived by Braden as an oil operator on Osage Indian lands.

It appears that the taxes were collected under protest "to avoid distraint and sale of * * * (the) property". It appears further that the facts of the case were not in dispute, leaving the basic consideration, in the judge's opinion, one of fundamental law.

To quote from the opinion of Judge Thomson* "the question is, as the law now stands, can the United States lawfully assess and collect from the lessee of the lands of its ward, the Osage Indian Tribe, a tax on the net income arising from such lease?"

The judge after citing cases parallel to the present one which have been decided by the Supreme Court, continued, "The question of the limitation of the power of congress to levy such a tax, if it definitely attempted to legislate for that purpose, is not involved in this controversy. Over taxation, congress has almost unlimited power, and I am not prepared to say that under such a power it cannot levy a tax upon lands of its wards, or the proceeds derived from these lands. The real question is—has congress attempted to do such a thing through the legislation heretofore enacted? It is conceded that all tribal funds are property of the Osage Tribe, including the oil deposits in question have been and are, 'inalienable in any form and subject to no form of encumbrance;' and it is clear that if the government levied a tax which the Indians were either unable or unwilling to pay, involuntary sale of the property would result.

"It would seem that to encumber the lands of its wards by the lien or burden of taxes would be wholly inconsistent with its trust to protect property of the tribe from all forms of alienation and incumbrance. Under the character of the trust existing between the government and the Osage Tribe it would seem impossible for the former to subject the lands of the latter to taxation without a clear violation of the trust which it owes to its wards.

"As the exercise of taxing power by Oklahoma might destroy the value of the lands of the Indians, so probably, the exercise of like taxing power by the government would have such destructive effect. Braden, the decedent in this case, is not taxed because the United States was without power to tax him, but because in the discharge of its obligations as guardian it has refused to exercise such power to the manifest detriment of its wards.

"Being of the opinion that the power exercised by the government is not supported either on principle or by authority, judgment will be entered for the plaintiff against the Collector of Internal Revenue in each of said cases for the amounts set forth in the respective statements of claim, with interest from the several dates when payment was made."

If this case is carried no further and

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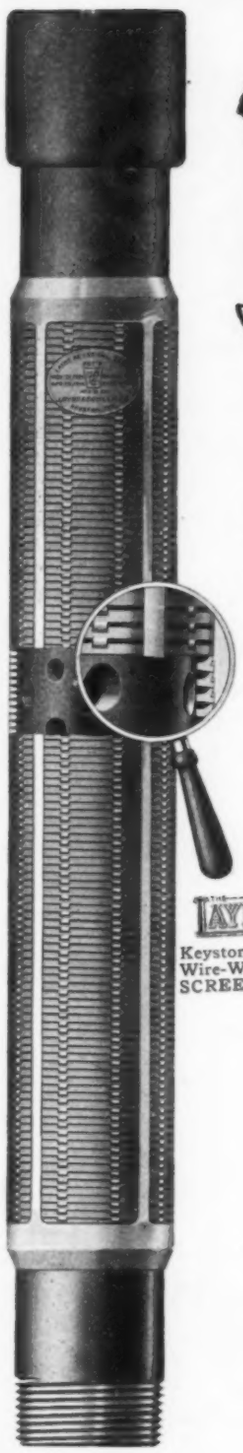
SCREEN Used

in the Oil Fields of the World than of All Other Wire-Wrapped Screen Combined



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Say you saw it in The OIL WEEKLY

Cheaper Drilling—Electrically

Facts Given by a Large Production Company in the Gulf Coast Section

Here are figures given by a large production company in the Coastal District, obtained from actual use of the electrical rig in the field. The company now has five electric drilling rigs in constant service.

WELL A: Depth 3 409 feet. Power cost drilling with steam $2,137.50—with electricity, $725.76—saving over steam, $1,411.74 or 66%.

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WELL C: Depth 3,423 feet—59% saving over steam.

WELL D: Depth 3,374 feet—67% saving over steam.

Quoting this company; "* * * there can be no question about the economy of the electric rig over the steam driven. There is a saving of almost 67% from an energy standpoint. It is as fast, as flexible, as practical and more power is available if it is required."

Let our engineers give you more complete and detailed information about electric drilling. Address communications to Lock Drawer 809, Beaumont, Texas.

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Any slot arrangement, and any undercut desired.

Kobe Heat Treated Screen Casing is the final result of years of intensive effort, embracing the most modern scientific process so far developed for the manufacture of a product of this type.

Kobe Pipe Offers the Petroleum Industry:

The strongest screen casing ever produced—Kobe 6¼-inch 54-pound and Kobe 8¼-inch 89-pound Heat Treated Seamless Steel Screen Casing, embracing 87 per cent of the total strength of a solid shaft made from the same material and of the same diameter as standard casing.

Heat Treated Screen Casing of standard sizes and weights which retain practically all of the original strength of the blank pipe, and with harder, stronger and tougher material around each slot.

A form of slot that is ideal—having sides that are smooth plane surfaces that diverge inwardly with a small uniform angle and having rounded ends that go straight through.

Kobe Pipe is saving the oil industry thousands of dollars annually IN FIRST COST ALONE. What it is saving as insurance of continuous production; and through minimizing losses from "bad pipe" and costly redrills is impossible to estimate; but in increasing these savings Kobe Heat Treated Screen Casing is rendering its greatest service to the Petroleum Industry.

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By R. S. DANFORTH, Contains charts as follows:

THE PRESSURE LOSS is shown at once for any capacity in barrels per hour or gallons per minute of any Saybolt or other viscosity oil. The charts are based on tests by Messrs. Stanton & Pannell of the National Physical Laboratory of Great Britain and checked by many experiments of oil companies in the United States.

THE VISCOSITY CONVERSION CHART shows the equivalents of the Saybolt Universal and Furol, Engler, Redwood, Redwood Admiralty, Absolute and Kinematic viscosities.

THE HORSE POWER CHARTS show the power required to pump against any working pressure with any efficiency of pump and drive.

Also the conversion of capacities in barrels per day, barrels per hour, gallons per minute and cubic feet per second.

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THE GULF PUBLISHING COMPANY

P. O. Box 1307 **Houston, Texas**

the present decision stands, the effect will indeed be far reaching.

Following the decision, the Osage Oil and Gas Lessees Association, composed of the holders of leases in the Osage Nation, met to decide a course of action and appointed a committee to thoroughly investigate the matter.

The committee consists of Judge James B. Diggs, L. G. Owen, W. C. Franklin, J. C. Denton, and J. H. Brown. A report will be made about February 1.

If action is brought against the government for the return of taxes paid on income derived from operations on Osage Indian lands, a rather large sum will be involved—probably between one hundred and one hundred and fifty millions of dollars.

Grayburg to Have Hand In Play at Piedras Pintas

San Antonio, Texas.—The Grayburg Oil Company last week purchased a 160-acre lease out of survey No. 245, north of the Humble Oil and Refining Company's Walsh 4, off Piedras Pintas dome in Duval County. The transaction provides for the drilling of a test within 30 days, and the tract is now being surveyed.

Reports from Duval County state that Humble is now moving in rigs for drilling of additional tests soon.

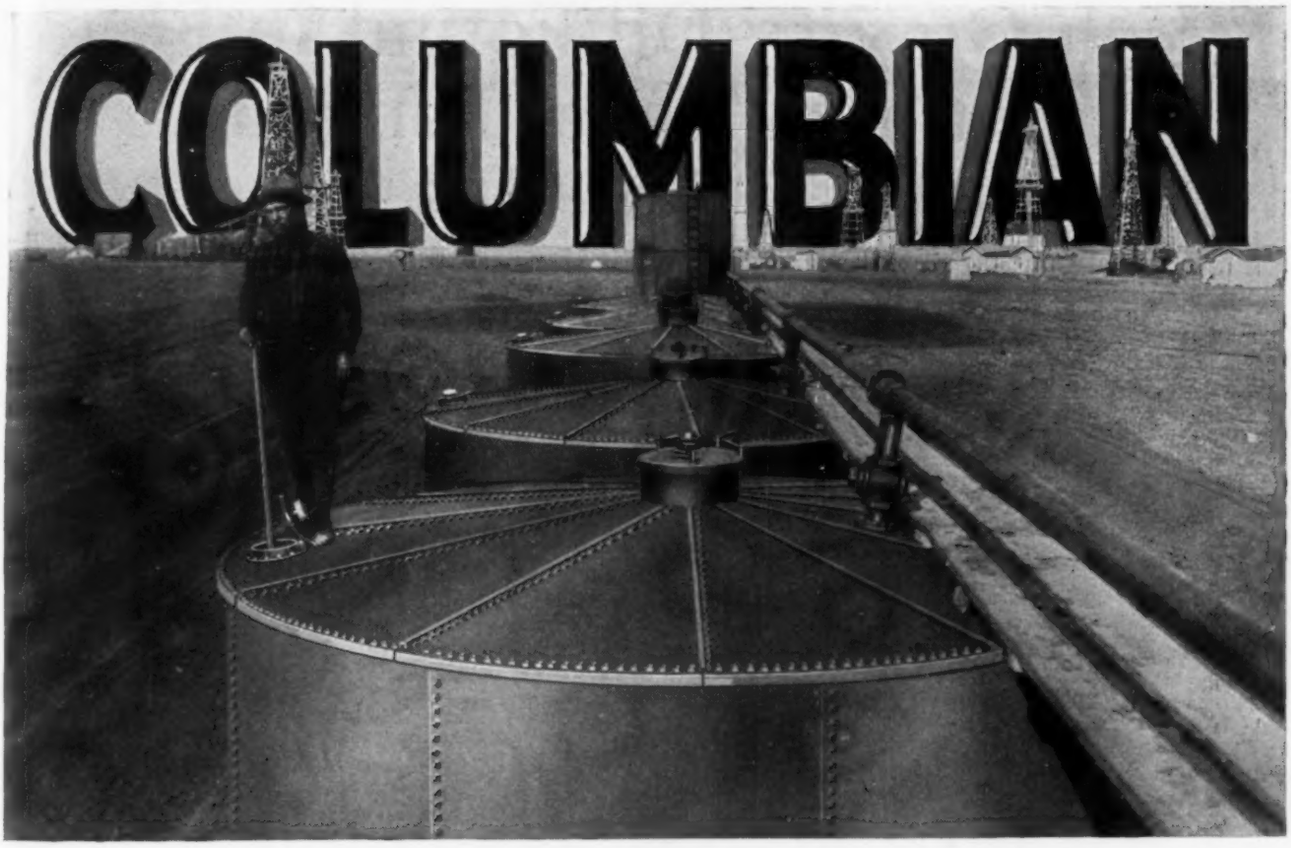
Benavides, the nearest town to the field, is arranging to take care of newcomers, and several new buildings including a 40-room hotel, a bank building and post office are to be built within the next few weeks, according to plans.

Prairie-Pure Oil Pipe Line To Be Operated from Dallas

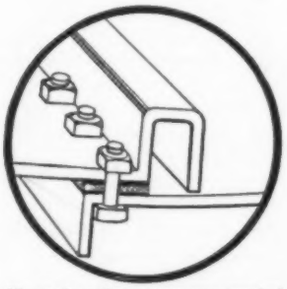
Dallas, Texas. — Operating headquarters of the Pure Oil Pipe Line Company of Texas will remain in Dallas, and Chas. Fitzgerald, former general superintendent, is in charge of operations. The controlling interest in the stock was acquired by the Prairie Pipe Line Company from the Pure Oil Company effective December 31, and the trunk line system extending from the Corsicana-Mexia district to Smiths Bluff, located on the Gulf Coast, is now functioning as a branch of the Prairie.

F. A. Louy, assistant treasurer of Prairie Pipe Line Company, and secretary-treasurer of the Pure Oil Pipe Line Company of Texas, has been in Dallas for the past 10 days completing the final transfer of the properties to Prairie.

Although the Pure trunk line system to the Coast has a maximum capacity of about 30,000 barrels of crude daily, it is generally understood that the transportation facilities of the line will be increased in the near future.



Here is shown a cross-section of the vacuum valve mounted in the cover of the Columbian thief-hole hatch. Both vacuum and pressure relief valves of this type are regular equipment on Columbian Tanks. Buck Valves may be had if and as specified.



No angle rafter extras are needed on the Columbian Improved Lap Joint Deck. Stronger reinforcement is formed in the sections. It is integral with the deck.

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Serving every oil field, there is a Columbian Dealer-Erector with adequate stocks and efficient erecting crews to take care of every requirement quickly and economically.

Among the exclusive features contributing to Columbian's outstanding construction is the improved lap joint deck. Each lap joint in the assembly is reinforced above with a box rib and below with a right angle flange—both formed in the deck sheets themselves. Thus the deck and its reinforcement are made integral. Greater strength and rigidity are obtained. All sizes from 65 to 10,000 barrels are made vapor tight.

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Say you saw it in The OIL WEEKLY

High Gravity Oil Found in Five Counties of Texas Panhandle

Development work most active in Hutchinson County where big campaign is under way for 1926

By H. H. King
Staff Representative

Amarillo, Texas. — The exploration work conducted in the Panhandle district of Texas since the discovery of oil in Carson County in February, 1921, has resulted in the finding of high gravity oil in commercial quantities in five connecting counties—Carson, Hutchinson, Gray, Wheeler and Potter—in the order named. Hutchinson County took the lead in daily production in the latter part of 1925, and has been proven for oil over sufficient area to be classed as the largest single producing county in the Panhandle. The sandy-lime oil horizon in Hutchinson County at the 2900-foot level on the south side of the Canadian River at the 3000-foot level on the north side of the river, is more prolific and attractive to major companies and small operators than the pay found in other counties. This condition has brought to Hutchinson County the first big drilling campaign ever staged in the Texas Panhandle, and 50 tests are now drilling or in process of starting operations. This drilling represents an expenditure of $2,000,000, allowing $40,000 for the average cost of a completed well.

Transportation and a suitable market has been the outstanding drawback to the development of oil fields in the Panhandle. Carson County's producing wells were the first to receive a pipe line outlet, and small lines were built from the main part of the field to a loading rack at Panhandle and a skimming plant at Amarillo. These lines are four-inch and six-inch, respectively, and are equipped to handle in excess of 10,000 barrels daily from the field, but owing to the cold test of the crude, the lines are now handling only 2,500 barrels daily. The two lines originally built to serve Carson County have since been extended north into Hutchinson County in response to the growth of production in the latter county during 1925, but daily crude runs are being prorated because of inability of the lines to transport the volume of crude offered. The lone oil producer in Potter County, and three pumpers in the Wilcox pool, Gray County, have no pipe line outlets, and the oil is being stored at the wells. A small pipe line is serving some of the five oil producers in Wheeler County, and the crude is loaded on tank cars at Lela for shipment to the refinery at Amarillo.

Increased volume of drilling and rising production in Hutchinson County induced the Kay County Gas Company, Marland subsidiary, to enter both Carson and Hutchinson Counties as a crude buyer effective November 16, 1925. The crude now purchased by this concern is being gathered and transported on contract by the Plains Pipe Line Company to the town of Panhandle, where it is loaded on tank cars for delivery to Texas City, with a freight rate of 20 cents per hundred pounds in effect. The Plains line is not equipped to handle current purchases made by the Marland subsidiary, and some of the surplus is going to storage in the field. The Kay County Gas Company has posted crude schedule consisting of five gravity grades ranging in price from $1.55 for 40 gravity and above down to $1.05 for below 31 gravity, while the only other buyer in the two counties—Pan-Tex Pipe Line Company is paying three-fourths of the Mid-Continent gravity price schedule. Panhandle crude averages from 36 to 39 gravity.

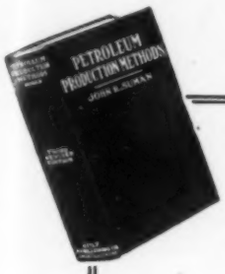
The entrance of the Kay County Gas Company into the Carson-Hutchinson County district as a crude buyer promises to be to be a boom for the operators, and steps are to be taken shortly by this buyer to provide adequate pipe line facilities to buy and transport all crude offered by producers. Officials of Marland Oil Company are to make a personal inspection of the oil fields this week in connection with a general tour of Marland's properties and operations in Texas, and an announcement will probably be made shortly regarding a new line to connect the field to a tank car loading rack. In the event a new line is built, it will be buried five feet, or more below the surface to reduce the trouble now being experienced by the two operating lines with the oil congealing in the line when temperature drops below 53 degrees.

Although the oil producing area in Carson County was directly responsible for a widespread wildcat campaign being conducted in the Panhandle district within the past four years, the nature of the oil horizon—a granite wash formation—has not been productive in quantities to permit attractive profits to lease owners, with the exception of a few companies that scored unusually good wells. The oil area in Carson County has been proven for about five square miles, with 32 oil wells now pumping about 2,200 barrels daily. The entire oil producing area in Carson County lies on the Burnett ranch, and stiff drilling obligations are attached to each lease contract. This condition served to eliminate the small operators at the beginning of the development of the field. The oil producing area on the Burnett ranch is now practically defined by dry gassers to the east, south and west, but wildcats are being drilled on the Burnett ranch some distance beyond the original field by independent operators, who have since received more attractive lease propositions from the Estate, and other pools may be uncovered by this exploration work.

The elimination of small operators from the Burnett ranch in Carson because of the heavy drilling obligations has since reacted to their advantage. While the major companies and substantial independents were taking leases and drilling in Carson County, the small operators and wildcatters began tying up leases to the north of the Burnett ranch in Hutchinson County, where land owners were willing to make concessions to get development started. The first well to show oil in Hutchinson County was completed by Holmes-McIlroy and McGee on the Smith ranch, located in the center of section 10, and about four miles northeast of oil production on the Burnett ranch. This completion was made in August, 1922 with an estimated flow of 3,000,000 cubic feet of gas and 15 barrels of oil at a total depth of 3175 feet. Gulf later brought in a well on the Dial ranch north of the Canadian River of the same caliber after drilling through the pay.

Development Was Slow

Other completions were brought in from the sandy-lime pay in Hutchinson County by independent operators at intervals of several months, but the play was slow and operating capital particularly scarce, as most of the drilling was being done by citizens of Amarillo on local funds. Real impetus was given development in the county last March when the Twin-Six Oil Company's Kingland 1, section 6, widened the field to the east with an initial flow of about 250 barrels at 2964 feet, and after being on production for



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Mr. A. L. Burns, Manager,
The Gulf Publishing Co.,
Houston, Texas.

My Dear Mr. Burns:

Express shipment of fifty copies of Deep well Drilling reached me today. Please accept my sincere thanks for the splendid manner in which the book is printed and bound; indeed, for the excellence of the entire job. It pleases me very much.

Wishing you a Happy and Prosperous New Year, believe me,

Sincerely,

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a short period the well gained in production. It averaged 400 barrels daily last week and 530 barrels daily during the week previous. Other nearby leases have since contributed equally as good producers. Hutchinson County averaged 2400 barrels daily last week from 24 oil producers, but this production represents only about one-half of the potential for the county. Four gassers with a combined flow of 264,00,000 cubic feet of gas have been completed and capped in Hutchinson County, while two dry holes represent the failures, although a third failure is threatened from a test drilling on the Weatherly land.

The granite wash formation found on the Burnett ranch in Carson County appears to thin out to the north near the Hutchinson County line, and a sandy-lime takes its place. The sandy-lime pay has sufficient hardness to withstand a shot of nitro, and a light shot is being given most of the new wells shortly after going on production.

The long delay experienced by Hutchinson County in becoming active with drilling made it necessary that the small operators, who pioneered the wildcatting, sell off portions of their leases to friends and lease speculators in order to protect their original investment. This situation led up to a widepread practice of splitting up large leases into 10, 20 and 40 acre tracts. Regrouping of the tracts is most difficult, and the result is considerable more drilling will be neccessary in the lower end of the county than the sandy-lime pay justifies. Many tracts are being taken for the drilling of one well, with an over-riding royalty. Sufficient wells have been completed on the Kingsland, Smith, Weatherly, Whittenburg and Dials ranches to indicate that a large oil area exists, and and many offsets are confronting present lease owners. Hutchinson County has 33 tests underway; 12 derricks and rigs up; and five locations awaiting timbers for prompt drilling. A number of the leading Mid-Continent producers have invaded Hutchinson County within the past few months, including: Skelly Oil Company, White Eagle Oil and Refining Company, Phillips Petroleum Company, The Texas Company, Prairie, and Texas Pacific Coal & Oil Company.

Magnolia Buys 320 Acres In Medina County Field

San Antonio, Texas.—Magnolia Petroleum Company several days ago bought a block of 320 acres in the Ina Oil Company in the Ina field, Medina County, for a consideration of $50,000. Magnolia plans to take charge of the acreage and drill during the winter months, reports here state.

The purchase includes five producing wells of the Ina Oil Company, which is all the developed production in the field. Most of the purchase is in the P. E. Durst survey.

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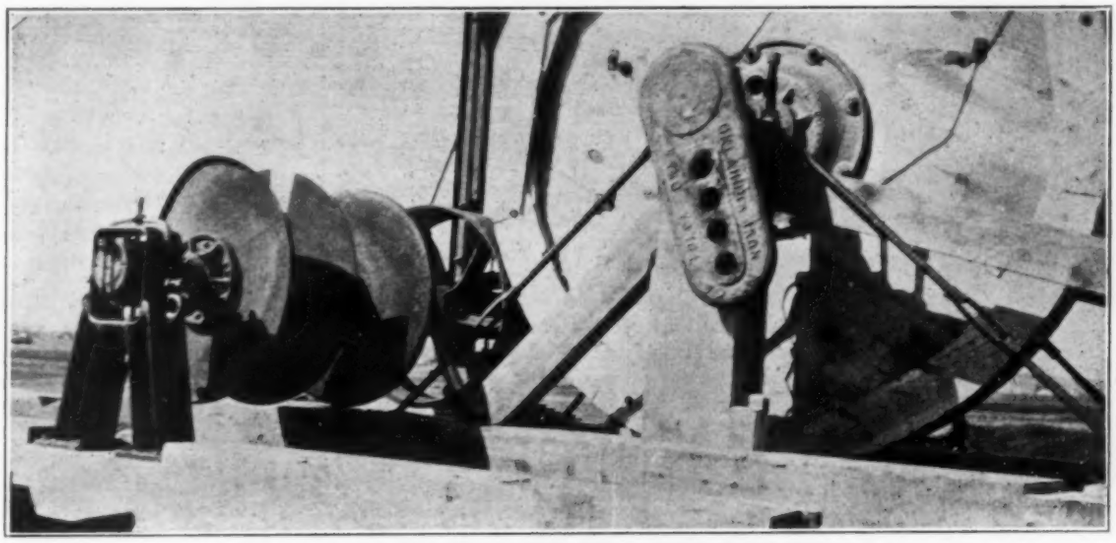

Tail-post of walk side reel mounted on support

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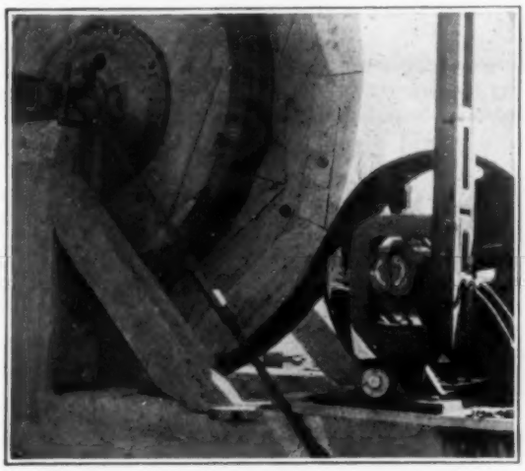

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		Cleveland	Stroud	Webb City	

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Duval County Development Hastens With Competition

Laredo, Texas.—The Humble Oil and Refining Company will build a pipe line to the new deep water port of Corpus Christi from Duval County in the event that development justifies it, according to reports in the fields here. The proposed line may run through the Mirando district picking up the production there and thence via the shortest route direct to the Gulf Coast.

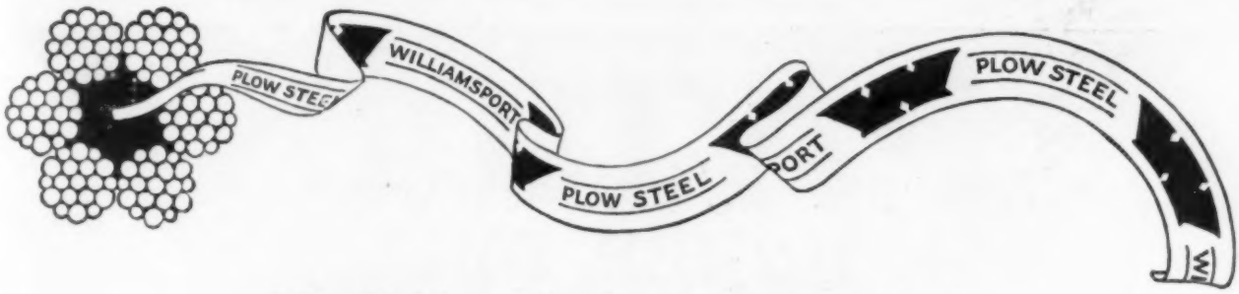
The Humble some time ago bought 500 acres at Ingleside near Corpus Christi for such a contingency. It has production in Kleberg County not far from Corpus Christi, and has prospects of developing a field there. In such event, a tank farm and shipping station at Corpus Christi would give it an outlet by water. Operators in the Mirando district say that a line to water would double production immediately as it would give an immediate outlet for all production.

Acreage around the Humble's well in Duval County is selling as high as $3000 an acre. The Humble has made a new location 400 feet south and 100 feet east of its Walsh 4, and will move its rig on, immediately starting the second well. Grayburg Oil Company of San Antonio has bought 160 acres in the new pool and plans to drill shortly. Other companies plan to drill soon, and rigs are beginning to arrive at Noleda.

Owing to the fact that acreage is high, the proven area likely to be limited to a dome and the high cost of drilling to such a depth, the small wildcatter is not much in evidence, and there is practically no speculative play. Such acreage as changes hands is usually with a drilling contract attached.

Magnloia Draws on Storage in December

Dallas, Texas.—Crude runs made by the Magnolia Petroleum Company from fields in Oklahoma, Kansas, Texas, Louisiana and Arkansas during December averaged 62,649 barrels daily. These figures represent approximately 50,000 barrels of crude being produced by Magnolia in the five states, and the balance is outside purchases. Although Magnolia's crude runs during December were in line with the average maintained throughout the past year, the withdrawals made on reserve crude stocks in Oklahoma and North Texas during December were greater than has been experienced in more than one year. Crude stocks held by Magnolia in Oklahoma and North Texas were reduced 695,854 barrels in December, leaving a total of 7,931,535 barrels on



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hand in the district at the close of the year.

Oklahoma fields are the principal sources of crude supply for Magnolia, while Texas, Arkansas, Louisiana and Kansas fill their places in the order named. The Arkansas-Louisiana production and crude purchases are stored in the fields, owing to Magnolia not having a pipe line outlet from these two states. Approximately 1,330,000 barrels of crude is held in storage by Magnolia in Arkansas, of which one-third is light oil and the balance Smackover heavy. Magnolia will eventually build a pipe line to Louisiana and Arkansas and clean out this storage oil, which is mostly held in steel tankage.

The complete merger of all Magnolia's properties in December with the Standard Oil Company of New York, has resulted in a separate pipe line company being formed to transport and store the crude produced and purchased by Magnolia Petroleum Company. The Magnolia Pipe Line Company will perform common carrier service for other companies when solicited. Greater production and crude purchases are being sought by Magnolia Petroleum Company since its merger with Standard, and several minor purchases of producing leases were made in North Texas in December, while a number of other trades for properties are underway.

Water shipments of fuel oil, refined oils (gasoline, kerosene and lubes) and crude made by Magnolia via tankers to the Atlantic Coast and foreign countries during the past five months follows:

	Fuil Oils Gallons	Refined Oils Gallons	Crude Bbls.
August	8,700,574	38,603,632	.....
September	6,268,896	47,555,150	.....
October	9,514,966	53,212,325	95,572
November	15,870,237	79,810,398	.....
December	6,897,669	51,917,248	.....

Magnolia's crude runs during November and December by fields follows:

Fields—	November Totals	December Totals
Cushing-Davenport	306,863	353,100
Healdton	203,700	194,907
Wewoka-Cromwell	139,302	190,127
Hewitt	84,819	90,646
Yale	52,655	55,171
Duncan	49,072	46,172
Burbank	65,918	44,683
Augusta	37,515	39,690
Cement	20,250	21,596
Walters-Beaver Creek	10,627	9,858
Totals for Okla. and Kan.	970,721	1,045,950
Lytton Springs	179,173	181,296
Luling	87,451	116,136
Electra	115,408	114,643
Burkburnett	80,138	80,807
Archer County	71,446	76,134
Mirando	53,644	41,607
Ranger-Olden	31,602	30,651
Mexia-Wortham	58,855	26,444
Desdemona-Comanche	26,387	25,123
Corsicana-Powell	22,297	19,662
Stephens County	16,384	16,916
Iatan-Mitchell County	2,175	7,660
Corsicana (Heavy)	8,456	7,401
Henrietta-Clay County	6,387	6,198
Thrall-Williamson County	1,082	873
Coleman County	538	487
Totals for Texas	761,433	752,038
Totals for Arkansas	73,262	77,054
Totalis for Louisiana	68,292	67,078
Grand total for 5 states	1,873,708	1,942,120

W. W. O'Donnell Dies

Shreveport, La., Jan. 11.—William W. O'Donnell, sixty-three years of age, an employee of the Louisiana Oil Refining Corporation and a veteran of the early booms in the oil fields of Pennsylvania, died at Shreveport on Saturday, January 9. Funeral services are to be held from the family home at Oil City, Tuesday, January 12. Interment will be at Vivian, La.

He was a familiar figure around the oil fields of Caddo, Bossier, and Webster Parishes, where he worked on the properties of the Louisiana company for more than a decade. Prior to his removal to Oil City in 1911, he is said to have worked for the Standard Oil Company and its subsidiaries in the fields of Pennsylvania and Ohio for more than thirty years. He is said to have had charge of the operation of the first oil well that was put on the beam at Oil City, Pennsylvania.

How Long Will Our Oil Last?

(*Continued from page 50*)

some conclusions of his own. He may be pardoned for thinking that one or perhaps both of the answers were tempered by prejudice. He may conclude that men found what they set out to find.

Still others, and many of these are within the petroleum industry, have decided that no man and no set of men know how much oil is underground, how much of it can be removed, or how long it will take to remove it.

Who Knows?

As it stands now the question of petroleum reserves is somewhat like the man having visited two clinics for the purpose of learning how long he can live. In one instance he has been given just three months for placing his house in order. But before this brief period has ended, along comes another set of experts to inform him that he has many years before him and that he may never die.

The "extremist" is considered a necessity. In order to induce men to indulge in physical exercise, a few men must give all their time to it and look on it as the important phase of living.

There are two sets of "extremists" regarding the life of oil reserves of the United States. One set would end it all within another ten years, provided they have not altered their opinions since 1922. Another would have oil to follow the course of Tennyson's brook and just go on and on.

That there is danger in following either course is evident. Oil is not going to be gone in the United States in another ten years, and this goes for oil from underground rocks and applies to extracting it from drilled wells. What mining may do and the retorting of shale are other matters.

Neither is oil going to last just as long as men want to drill for it.

Safety for the petroleum industry and for the whole country lies in the fact that the majority of men in the petroleum industry do not follow either school of extreme thought. This class may be styled as in the middle ground.

After all it is not what men believe that will determine the life of the oil fields of the United States. It is what men do. If men will look on oil as a product that is so valuable it should be handled just as it would be gone in another year, or another ten years, the life of oil fields will be lengthened.

And the oil industry needs more effort toward saving oil than it does talk about when it will be gone. So the answer to the question of how long petroleum reserves will last gets back to the human factor. The supply is variable. It will last just as long as men permit it to last.

Only in so far as the opinions of the "extremists" have contributed to the action of men in saving oil have they been of value.

Program for Coastal Fields Problem Of Keeping Up Output

Late discoveries of new domes promise much activity in their development and other wildcat work

By Wallace Davis
Staff Representative

ACCORDING to present indications most of the effort spent in development of oil fields in the Gulf Coast territory, during 1926, will be toward maintaining production by inside drilling. There is not at this time, a single extension that promises new production in big quantities, and the probabilities for deep oil are doubtful.

It is the opinion of most production superintendents that if production is held within a reasonably close figure to that of 1925, drilling will be well rewarded. Gulf Coast showed an increase during 1925 when compared with the previous year, due to South Liberty. That field is rapidly declining now, however, and no area is looming to take its place. Boling and the Nash Dome, new fields, are yet to show what they can do, and the depth of the pay at both places is such that development will be much slower than it was at Liberty.

All the old major fields showed slight declines in 1925, in spite of more drilling than in the previous year. A number of tests for deep pay were made in different fields, with indifferent success. The expense of drilling deeper than 4000 or 4500 feet is sufficiently great to check promiscuous testing to these depths. Results obtained so far where such tests have been made have been to discourage the search for deep oil. Orange is the only field where any quantity of production has been found below 4500 feet, and if the books were balanced, it is quite probable that more money has been spent in deep holes at Orange than will ever be made from the oil coming from them.

In all the old fields there will be a certain amount of work going on continuously. About half the work done last year was confined to reconditioning and working over old wells, and it is safe to say that the percentage of this type of work will be even higher this year.

Four areas adjoining old proven and exploited territory deserve mention because of discoveries that have already been made, and because of the testing that will be done this year.

Pierce Junction Extension

Pierce Junction was extended more than a half mile toward the southwest early in the fall by a 3000 barrel well drilled by the Rio Bravo Oil Company. By the close of the year another producer had been completed in the extension and a third well is now drilling. Depth of this oil is between 3860 and 3900 feet. Both wells have held up reasonably well, but have made a lot of salt water with the oil. Because of a lack of gas pressure, this water is being used to help produce the oil and is considered an advantage, rather than a hindrance. Rio Bravo will keep one outfit running at Pierce Junction until it determines what the extension is worth. This company controls all the acreage near the producers, and it is not probable that any other company will do any drilling unless the area shows up much better than it has to date.

The output of Pierce Junction has been increased to about three times its former figure by the extension.

At Saratoga, the Rio Bravo also plans to drill a test well to the north of the old field proper. Last spring this company brought in a small well north of the proven area and from a deeper sand. The well failed to hold up in its yield, and other tests drilled near it failed to make producers of any consequence. As a result of the well, however, the company has pushed further out and will now test its Fountain 100-acre lease. Location for a test has been made about a half mile north of the well that produced last spring.

The Vacuum will also probably drill to test acreage which it holds at Saratoga.

One of the most encouraging wells drilled in the vicinity of old fields during 1925 was Hodges No. 5, at Batson, completed by the Kirby Petroleum Company on October 28. This well is north of the old field and came in for 10,000 barrels of 21 gravity oil, from 3450 feet, the greatest depth from which heavy oil has ever been produced at Batson. After flowing for several days, however, the well sanded up and has not been brought back at this time. Efforts are now being made to clean it out and there has been some delay on account of a fishing job.

Kirby is planning a sixth test 300 feet further north of No. 5, and upon completion of it, information should be obtained to show whether No. 5 was a freak well such as has been found in other coastal fields. It is not uncommon for a gulf coast well to hit a pocket of oil and flow big for a few days and then go dead.

A few other companies will probably drill offest wells to Kirby's test, and a deepening campaign may be carried out in the Batson old field.

Late in November, Yount-Lee Oil Company brought in a well at Spindle Top located at 1200 feet from the old productive part of the field, good for 800 barrels of 28 gravity oil, from 2588 feet. Considerable conjecture has been made as to what this well means in the way of deep oil at Spindle Top. The well is still producing, but has not held to its initial output. Yount-Lee will put down other tests and a few companies owning acreage adjoining the Yount-Lee block will be forced to drill offsets in case another producer is drilled in.

More wells will probably be drilled at Orange and Hull than in any of the old districts this year. Practically all the major companies have properties in both fields and every company will try to keep its output as high as possible. A few of the companies have plans to keep at least four rigs running throughout the year. At Hull the Phoenix, Baldwin and Dolbear leases will get most of the drilling.

Leasing obligations require a certain number of wells to be drilled and these generally call for offsets by adjoining leaseholders. This assures a certain amount of work, and upon future developments will depend whatever else is done.

Big Companies Wildcat

Development of new territory in the Texas and Louisiana Gulf Coast during the coming year will by far surpass that work done in this section in 1925 if present indications fairly represent the wildcatting to be done. The beginning of 1926 shows a more extensive search for new crude in the coastal territory than has ever been known before. The interesting feature about the present wildcat campaign in this part of the country is the fact that, with few exceptions, the development is a big company affair. More than 90 per cent of the tests now going down in unproven coastal areas are big company operations.

The vast wildcatting campaign now scheduled to be carried out, beginning immediately, came unpredicted. Less than six weeks ago, coastal operators

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could visualize no such turn in activities. Thus the bulk of development to come within the coming year results from findings of a single month through wildcat drilling around coastal salt domes.

Wildcatting in the coast is due to hinge largely around four particular spots, three of which showed little or no prominence until the last month in 1925. Boling dome, Wharton County; Nash dome, Fort Bend County; Piedras Pintas dome, Duval County; and the Lockport region, Calcasieu Parish, Louisiana, will, barring new discoveries possible during the year, be the four leading scenes of wildcat activity for 1926.

Lockport, for the past five months especially, is recognized as a proven field, and for some time has been yielding between 3000 and 4100 barrels daily. The extent of the field has not yet been proved, however, and surrounding territory has, since early in 1925, been the site of intensive drilling. Vacuum Oil Company, which owns the acreage in and around Lockport jointly with the Gulf Refining Company of Louisiana, has done this drilling, and now has three stable producers. Six tests are now going down around the field with four additional locations made for immediate drilling. Vacuum's schedule for the year is to keep eight or nine rigs running in efforts to develop the most possible production from the sands of Lockport.

Boling Dome

Boling dome promises to be the location of great activity during 1926, chiefly for two reasons. First, the acreage surrounding the deep sand discovery well off the dome is so controlled as to create competition, and second, that the 10,000-barrel completion which opened the field leads to indicate a pool of appreciable size. The Taylor 3, wildcat of The Texas Company, which first found commercial production at Boling, is now flowing around 3400 barrels through a ½-inch choke, offering sufficient evidence that a field of considerable size is there. Within a mile radius of the producer the largest companies operating in the Gulf Coast including The Texas Company, Humble, Gulf, Sun, Sinclair, Vacuum and Atlantic have acreage with probable production. At present, less than a month following completion of the first well, one test is drilling, three derricks are up and three locations made. The arrangement of the acreage will force considerable offsetting, and regardless of how the prospective Boling field turns out this point is due to have a heavy drilling campaign during 1926.

Piedras Pintas dome in Duval County, opened December 20 with Humble's Walsh 4, flowing 1000 barrels initial of 43 gravity crude, is another prospective field which will undergo much development in 1926. It, like Boling, will be a big company proposition with acreage close in held by practically all of the major companies in the Gulf Coast. It is at this point that the Humble Company will center more of its wildcat drilling than other sites in case the spot results in the field expected from the action of the one well. The production of the Walsh 4 has risen from 1000 to around 3200 barrels since completion.

No doubt the most unexpected find in Gulf Coastal territory during recent weeks is heavy crude at below 4000 feet off the Nash dome by Rycade Oil Corporation. The success came with the completion of the company's Nash 5 at 4127 feet for 500 barrels of 20.5 gravity crude January 3, after 12 dry holes had resulted from wildcatting around the dome for 18 months. Though the development of acreage around this dome will be practically in the hands of Rycade, drilling will apparently not be retarded. In less than 10 days following completion of the discovery well two new locations were made. A block of 11,000 acres completely surrounding the well is held by Rycade, which offers little chance for development by other companies. Possible productive territory is held several thousand feet away by Humble, the Sun Company and Marland of Texas. Whether or not these companies will test their acreage is problematical.

During 1925 Fort Bend, the Lockport region, and Harris County have predominated in the number of wildcat tests drilling. This year the two former sections bid fair to remain in the first rank with Wharton and Duval Counties coming to the front. Harris County shows little promise of being the scene of much drilling this year as compared to last. The Hockley vicinity and Green's Bayou were last year the sites of most Harris County drilling. No signs of production were found, and toward the close of 1925 there was a material falling off of activities in the county. The Cross Timbers section, toward Humble field from Houston, offered prospects for pay for some time in the fall when three encouraging sands were picked up in a test there, but unfavorable formations turned up at below 3800 feet, and the test was abandoned. The beginning of the second week of this year saw another test being started at Cross Timbers, and further drilling there will be determined by the find of this test.

Aside from the activity mentioned little development of importance in the Gulf Coast is in sight. Regardless of this considerable drilling is being done in various sections. At Fannette in Jefferson County the Gulf is drilling one test and has location for a second. Not far away, at Big Hill, the Houston Oil Company is operating two wildcats. Gulf has four rigs running at Long Point in Fort Bend County. The Houston Oil Company is hunting new gas territory in Refugio County, near Mission Bay. This company is operating a wildcat test in Victoria County. In Hardin County, off Saratoga dome, Vacuum Oil Company has made location for its third test in search for deep sand production. Two tests have been abandoned there by Vacuum within the past two months. At various points over the coastal territory independent operators are testing acreage following indications of sulphur seepage and other surface indications. Most of these wildcats drilled at random several miles away from production are started with the view of haphazard prospecting as shallow tests, and have little influence on the development of Gulf Coast territory.

Tulsa, Okla.—A definite step toward the official confirmation of the merger of the Waite Phillips Company and the Barnsdall Corporation took place at a directors meeting of the Barnsdall Corporation in New York Tuesday when plans were made for financing the consolidation.

E. B. Reeser of Tulsa was elected president of the enlarged Barnsdall organization, succeeding Robert Law, Jr., resigned. Law will remain as director. Other directors will include E. B. Tinker, Chase National Bank, New York, and Elisha Walker, Blair and Company. Matt Bush, president of the American International Corporation, was chosen as chairman of the board.

The election of Matt Bush chairman of the board of directors points to an early entry of the Simms Petroleum Corporation into the merger since the American International Corporation which Bush heads controls a large part of the Simms stock.

Dallas, Texas.—Rumors mentioned in press dispatches from New York regarding the Simms Petroleum Company being involved in the merger of several prominent Mid-Continent Producing companies are without foundation according to statement made by Edward I. Moore, president, Tuesday afternoon. News of the proposed merger of Barnsdall and Waite Phillips Company also mentioned Simms as being a probable party to the combine. Certain individuals in Wall Street have talked it around that Simms properties in the Mid-Continent are desirable material for a merger but that is all it amounts to, states Mr. Moore.

Employees of Simms have also been assured by the president that there are no grounds for the rumors.

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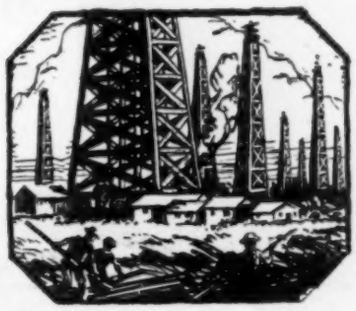

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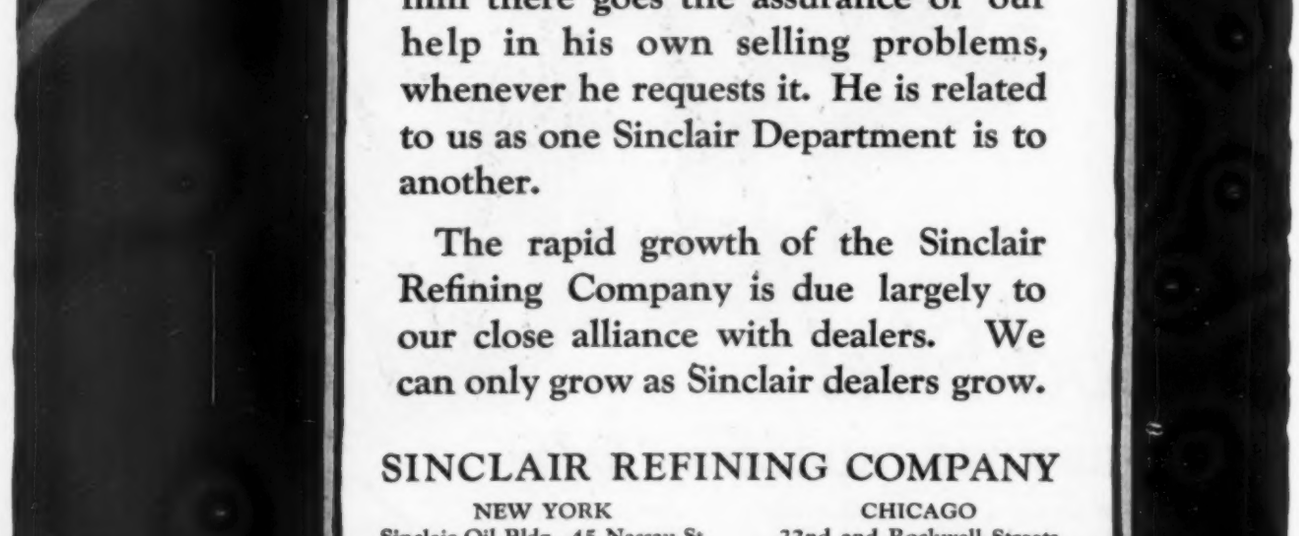
Telephone: Crawford 2000

Cable Address: "Lucent"



Say you saw it in The OIL WEEKLY

CRUDE OIL PRICE QUOTATIONS

Crude Price Changes

January 8.—Effective today the Ohio Oil Company posted a reduction of 20 cents on Sunburst, Montana crude, making the price $1.15.

Current Postings

CALIFORNIA

Kern Rixer, Wheeler Ridge, McKittrick, Lost Hills, Coalinga, Newhall, Midway, Sunset, Elk Hills

	Jan. 13 1926
14 to 19.9 gravity	.75

La Habra, Whittier

14 to 19.9 gravity	.85
20 gravity	.87
21 gravity	.89
22 gravity	.91

Montebello

14 to 19.9 gravity	.85
20 gravity	.87
21 gravity	.89
22 gravity	.91
23 gravity	.94
24 gravity	.97
25 gravity	1.01
27 gravity	1.04
28 gravity	1.07
29 gravity	1.10
30 gravity	1.13

***Torrance, Richfield, Inglewood, Brea, Olinda, Signal Hill, Huntington Beach**

14 gravity	.85
15 gravity	.87
16 gravity	.90
17 gravity	.94
18 gravity	.98
19 gravity	1.02
20 gravity	1.06
21 gravity	1.10
22 gravity	1.14
23 gravity	1.18
24 gravity	1.22
25 gravity	1.26
26 gravity	1.30
27 gravity	1.34
28 gravity	1.38
29 gravity	1.42
30 gravity	1.46
31 gravity	1.52

*Inglewood and Torrance follow this posting through 28 degrees only.

Lost Hills, Midway, Sunset, Elk Hills

14 to 19.9 gravity	.75
20 gravity	.79
21 gravity	.84
22 gravity	.92
23 gravity	1.00
24 gravity	1.08
25 gravity	1.16
26 gravity	1.24
27 gravity	1.32
28 gravity	1.40
29 gravity	1.48
30 gravity	1.56
31 gravity	1.64
32 gravity	1.72
33 g avity	1.80
34 gravity	1.88

Coalinga, Wheeler Ridge

20 gravity	.91
21 gravity	.92
22 gravity	.93
23 gravity	.95

Wheeler Ridge

14 to 19.9 gravity	.75
20 gravity	.78
21 gravity	.81
22 gravity	.84
23 gravity	.87
24 gravity	.90
25 gravity	.93
26 gravity	.97
27 gravity	1.00

Coalinga

14 to 19.9 gravity	.75
20 gravity	.79
21 gravity	.84
22 gravity	.89
23 gravity	.94
24 gravity	.99
25 gravity	1.04
26 gravity	1.09
27 gravity	1.14
28 gravity	1.19
29 gravity	1.24
30 gravity	1.29
31 gravity	1.34
32 gravity	1.39
33 gravity	1.44
34 gravity	1.49
35 gravity	1.54

Signal Hill

31 gravity	1.52

Coyote Hills

14 to 19.9 gravity	.85
20 gravity	.88
21 gravity	.94
22 gravity	1.00
23 gravity	1.06
24 gravity	1.10
25 gravity	1.16
26 gravity	1.24
27 gravity	1.30
28 gravity	1.36
29 gravity	1.42
30 gravity	1.48

Santa Fe Springs

24 gravity	.97
25 gravity	1.05
26 gravity	1.13
27 gravity	1.21
28 gravity	1.28
29 gravity	1.34
30 gravity	1.40
31 gravity	1.46
32 gravity	1.52
33 gravity	1.60
34 gravity	1.68
35 gravity	1.76
36 gravity	1.84
37 gravity	1.93
38 gravity	2.00

Rosecrans, Dominguez

26 gravity	1.30
27 gravity	1.34
27 gravity	1.38
28 gravity	1.42
29 gravity	1.46
30 gravity	1.50
31 gravity	1.52
32 gravity	1.52
33 gravity	1.64
34 gravity	1.70
35 gravity	1.76
36 gravity	1.84
37 gravity	1.92
38 gravity	2.00
39 gravity	2.08
40 gravity	2.16
41 gravity	2.24
42 gravity	2.30

Fuel Oil

Richmond	1.04
El Segundo	1.00
San Pedro	1.00

EASTERN STATES

New York Transit	3.65
Bradford District	3.65
National Transit	3.55
Southwest	3.55
Eureka	3.50
Macksburg	3.30
Gains	2.95
Somerset medium	2.45
Somerset light	2.60
Cabell	2.35
Ragland	1.40
Corning	1.95

CENTRAL STATES

Illinois	1.87
Indiana	1.78
Lima	1.98
Plymouth	1.40
Princeton	1.87
Waterloo	1.00
Wooster	2.00

WESTERN KENTUCKY

Posted by Indian Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, Cumberland and Monroe Counties

36 and above	2.05
33 to 35.9	1.95
32.9 and below	1.85

MID-CONTINENT

	Prairie Sinclair Texas Gulf	Magnolia
Below 28		1.07
28 to 28.9 gravity	1.15	1.15
29 to 29.9 gravity	1.25	1.25
30 to 30.9 gravity	1.31	1.31
31 to 31.9 gravity	1.30	1.39
32 to 32.9 gravity	1.47	1.47
33 to 33.9 gravity	1.55	1.55
34 to 34.9 gravity	1.63	1.63
35 to 35.9 gravity	1.71	1.71
36 to 36.9 gravity	1.79	1.79
37 to 37.9 gravity	1.87	1.87
38 to 38.9 gravity	1.95	1.95
39 to 39.9 gravity	2.03	2.03
40 to 40.9 gravity	2.11	2.11
41 to 41.9 gravity	2.19	2.19
42 to 42.9 gravity	2.27	2.27
43 to 43.9 gravity	2.35	2.35
44 Baume gravity and above	2.43	2.43

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran, Somerset and Big Lake crude

	Somerset (Grayburg)	Humble O. & R. Co. Texas Co.
28 to 28.9 gravity	1.15	1.15
29 to 29.9 gravity	1.25	1.25
30 to 30.9 gravity	1.31	1.31
31 to 31.9 gravity	1.39	1.39
32 to 32.9 gravity	1.47	1.47
33 to 33.9 gravity	1.55	1.55
34 to 34.9 gravity	1.63	1.63
35 to 35.9 gravity	1.71	1.71
36 to 36.9 gravity	1.79	1.79
37 to 37.9 g avity	1.87	1.87
38 to 38.9 gravity	1.95	1.95
39 to 39.9 gravity	2.01	2.03
40 to 40.9 gravity	2.07	2.11
41 to 41.9 gravity	2.13	2.19
42 to 42.9 gravity	2.19	2.27
43 to 43.9 gravity	2.25	2.35
44 and above	2.31	2.43

SOUTH TEXAS

Mirando (Texpata)	1.05
Mirando (Magnolia)	1.05

GULF COAST

Grade "A"	1.50
Grade "B" at Blue Ridge, Hull and Pierce Junction	1.25

LULING

Based on Contract	1.10

LOUISIANA-ARKANSAS

Caddo

38 gravity and above	1.95
35 to 37.9 gravity	1.83
32 to 34.9 gravity	1.75
Below 32 gravity	1.65

Homer

35 gravity and above	1.75
33 to 34.9 gravity	1.65
31 to 32.9 gravity	1.55
Below 31 gravity	1.40

(Continued on next page)

Cotton Valley	Jan. 13 1926
All grades	1.10
Haynesville	
Below 33 gravity	1.55
Below 33 gravity	1.10
Bull Bayou	
38 gravity and above	1.75
35 gravity to 37.9	1.60
32 to 34.9 gravity	1.45
De Soto crude	1.80
Crichton	1.60
Bellevue	1.65
Jennings	1.50
Vinton	1.50
Edgerly crude	1.50
Smackover (Standard, Gulf, Louisiana, Shreveport-El Dorado and Atlanta)	
27 and above	1.30
26 to 26.9 gravity	1.25
25 to 25.9 gravity	1.20
24 to 24.9 gravity	1.15
Below 24 gravity	.85
The Texas Company	
26 to 26.9 gravity	1.25
25 to 25.9 gravity	1.20
24 to 24.9 gravity	1.15
El Dorado	
33 gravity and above	1.65
Below 33 gravity	1.55
East Field (Calion)	.85
Stephens District	
26 gravity and above	1.40
Below 26 gravity	1.20
WYOMING-MONTANA	
Wyoming	
Byron	2.00
Ferris	1.28
Elk Basin	1.90
Grea Creek	1.90
Rock Creek	1.75
Lost Soldier	1.10
Lance Creek	1.90
Mule Creek	1.25
Notches	.65
Big Muddy	1.75
Osage	1.90
Hamilton Dome	1.55
Pilot Butte	1.50
Torchlight-Greybull	1.90
Lander	.85
Salt Creek (Midwest Refining Company)	
29 to 29.9 gravity	1.23
30 to 30.9 gravity	1.31
31 to 31.9 gravity	1.39
32 to 32.9 gravity	1.47
33 to 33.9 gravity	1.55
34 to 34.9 gravity	1.63
35 to 35.9 gravity	1.71
36 to 36.0 gravity	1.79
37 to 37.9 gravity	1.87
Montana	
Sunburst	1.15
Cat Creek	1.90
NEW MEXICO	
Artesia	1.35
Hogback	1.95
CANADIAN CRUDE	
Oil Springs	2.45
Petrolia	2.38

*Bounty on Canadian crude is ¾ cent per gallon, or 26¼ cents per barrel.

Wildcat in Jack County Adds New North Texas Area

Wichita Falls, Texas.—Wildcat interest in North Texas was extended to an entirely new area during the past week when the Buttram Petroleum Company of Oklahoma City scored an oil producer from the Strawn formation in the southwestern part of Jack County at a depth of 2012 feet. The top of the sand was encountered at 2007 feet, and sufficient gas is present to cause the well to flow by small heads. The well is rated at 60 barrels on the pump, and has been shut down pending the arrival of officials from Oklahoma and also for storage. This wildcat was drilled with cable tools on the Joe Preston land, D. C. Sleygle survey, abstract 1003, and about five miles southeast of Bryson. The nearest oil production is located about four miles due east on the J. R. Williams land, where Roxana has a 4600-foot producer making about 25 barrels natural after being completed three years ago. Roxana's deep producer is served by a pipe line.

The discovery of oil in Jack County in the Strawn series will result in a fresh outbreak of wildcat activities in the county, and the taking of lease blocks is expected to begin shortly. Exploration work has been carried on in a small way in various parts of the county for many years, with a small shallow pool making unusually high grade lube oils already existing in the upper part of the county. The Strawn sand is somewhat erratic in carrying oil, but the sand pay has been found attractive and profitable in pools developed in counties adjoining Jack County.

A second high gravity oil producer from the deep sand pay in Cooke County is promised from the Big Indian Oil and Development Company's F. Lester 1, located in the northwest corner of the south half of section 24, about one mile north of the discovery well. The Lester test logged an oil sand at 3653-80 feet, and broken oil sand at 3580-90 feet, but went into salt water at 3592 feet while carrying 2000 feet oil in hole. It was plugged back to 3590 feet, and swabbed about 40 barrels of 47 gravity oil before water again broke in. Another attempt will be made to plug back and shut off the water, while in the meantime a small pumper is assured. Gulf Production Company is taking leases for a block of 6000 acres in the southwest corner of Wise County near the town of Leo, and is expected to drill a deep test when titles are perfected.

The Noble-Dyson field in Wilbarger County was extended a half mile to the southeast last week when C. L. Sloan et al's Waggoner 1, located in the northwest corner of section 32, block 4, filled 1500 feet of oil in the hole within 12 hours after bailing broken sandy-lime pay at 2390-2405 feet, with a total depth of 2425 feet in shale. The big pipe is being pulled to complete the well. Roxana's Waggoner 2-A, section 43, swabbed 25 barrels of oil on a 10-hour gauge after a 30 quart shot in sandy-lime pay at 2330-42 feet, with a total depth of 2360 feet. This well failed to make a producer in the Dyson sand, and is more than a half mile west of the nearest deep producer in the field.

Gas Blow-out at 1519 Feet In Natchitoches Wildcat

Shreveport, La.—The Amerada Petroleum Corporation suffered a gas blow-out last week in its Wafer wildcat, located in section 3-11-8, about six miles northwest of Campti, in Natchitoches Parish. The top of a hard sandy shell formation was encountered at a depth of 1519 feet and penetrated to a depth of two feet. The blow-out occurred while the crew was pulling drill stem. This is at a rank wildcat location, about fifteen miles east from the nearest production in the De Soto-Bull Bayou district.

The Gulf Refining Company is drilling in hard brown shale at a depth of approximately 5900 feet in its Williams deep test, in section 31-13-11 of the Naborton district, De Soto Parish.

D. C. Richardson, of Shreveport, is said to have decided to complete his Youree-Randolph wildcat, near Belcher, Caddo Parish, as a gas well. It will be remembered that this well recently came in as a dry gasser from a total depth of 2258 feet. It shows a rock pressure of 820 pounds, and is estimated to be capable of producing around 15 million cubic feet of dry gas per day.

Climax Service Branch

St. Louis, Mo.—The Climax Company, 1112 Kentucky Avenue, St. Louis, Missouri, carries an adequate stock of parts for Climax "Trustworthy" Engines, manufactured by the Climax Engineering Company, Clinton, Iowa, and maintains a competent service organization. It also operates a complete machine shop equipped for the reconditioning and rebuilding of all makes of gas engines.

AVERAGE DAILY PRODUCTION FOR U.S.

Texas

NORTH TEXAS

	Jan. 2	Jan. 9
Burkburnett	12,750	12,700
Electra	17 050	17,000
Iowa Park and K-M-A	5,550	5,500
Wilbarger	12,300	11,900
Panhandle	3 300	2,900
Petrolia	400	400
Archer County	33,600	30 300
Others	1,000	900
Total	85,950	81,600

EAST CENTRAL TEXAS

Mexia	14,150	14,050
Currie	1,100	1,100
Richland	2,550	2,500
Corsicana-Powell	34,150	33,650
Wortham	12 850	12,700
Total	64,800	64,000

WEST CENTRAL TEXAS

Stephens County	13,850	13,100
Eastland County	6,800	6 200
Desdemona	2,250	2,050
Young County	9,200	9,200
Palo Pinto County	400	450
Callahan County	4,950	4,950
Shackelford County	2,500	2,400
Reagan County	33 800	32,450
Others	5,400	5,000
Total	79,150	75,800

SOUTHWEST TEXAS

Piedras Pintas	1,700	1,700
Luling	21,300	21,400
Mirando	6,200	6,200
Somerset	2,150	2,200
Lytton Springs	8 250	8,150
Others	700	650
Total	40,300	40 300
Texas Outside Gulf Coast	267,200	261,700

GULF COAST

Goose Creek	8,250	8,450
Hull	14,350	14,200
Saratoga	1,100	900
Blue Ridge	800	800
Damon Mound	950	1,050
Batson	1,100	1,000
West Columbia	8,950	9,000
Humble	4 850	4,800
Pierce Junction	850	1,400
Sour Lake	3,900	3,800
Spindletop	1,150	1,150
Orange County	14,750	16,400
Edgerly	700	700
Evangeline	1,000	1,000
Vinton	6,750	6,700
Lockport	3,000	2,750
South Liberty	9,400	9,200
Big Creek	900	1,150
Boling	3,200	2 400
Others	1,250	1,250
Total	86,650	88,100

Louisiana

Homer	6,050	5,800
Haynesville	11,400	11,400
Caddo Light	8 250	8,800
Caddo heavy	2,600	2,550
De Soto, Red River	3,800	3,800
Elm Grove	600	650
Bellevue	2,400	2,350
Cotton Valley	8,500	8,400
Others	450	450
Total	44,050	44,200

Arkansas

El Dorado	7,850	7 800
Smackover light	19,550	19,400
Smackover heavy	158,000	153,700
Stephens	1,750	1,770
Nevada	1,550	1,550
Totals	188,700	184,150

Oklahoma

	Jan. 2	Jan. 9
North Braman	2,250	2,300
South Braman	4 000	4,300
Blackwell	2,600	2,850
Hubbard	1,950	1,800
Thomas	15,050	14,750
Tonkawa	40,850	45 650
Garber	32,100	29,930
Burbank	44,950	44,600
Osage, outside Burbank	33,050	33,000
Watchorn	1,850	1,800
Cushing	22,650	22,650
Yale Jennings	11,900	11,850
Davenport	19 800	20,350
Bristow-Slick	31 500	31,750
North Okmulgee	18,200	18,550
Lyons-Deaner	4,400	4,400
Stroud	3 000	2,950
Cromwell	20,500	20,250
Papoose	12,950	13,120
Wewoka	11,850	11,800
Duncan District	7 700	7,600
Graham	9,150	9,150
Fox	4,150	4,100
Healdton	15,050	15,050
Hewitt	13,250	13 250
Others	63,000	62,800
Total	447,700	449,750

Kansas

Florence-Covert	1,900	1,900
Peabody Elbing	4 850	4,800
Eldorado-Towanda	14,250	14,150
Augusta-Fox Bush	5,100	5,100
Rainbow Bend	6,350	5,550
Russell	5,700	5 700
Others	62,950	62,750
Totals	101,100	99,950

California

Santa Fe Springs	50,500	51,500
Long Beach	111,000	112 500
Huntington Beach	46,000	46,000
Torrance	32,000	32,000
Dominguez	24,500	23,500
Rosecrans	25,500	23,500
Inglewood	62,000	62,500
Midway-Sunset	94,000	93,000
Others	184,000	195 000
Total	629,500	629,000

Mountain States

WYOMING

Salt Creek	58.300	62,450
Grass Creek	2,850	2,700
Elk Basin	600	650
Big Muddy	3,350	3,250
Lost Soldier	4,050	4,050
Rock River	2,900	2 950
Teapot Dome	1,900	1,900
Others	4,600	4,500
Total	78,600	82,450

MONTANA

Cat Creek	3,400	3,200
Sunburst	13,000	10,100
Total	16,400	13,300

COLORADO

Moffats (Craig)	3,200	3 150
Fort Collins	2,050	1,900
Florence	400	400
Others	400	450
Total	6,050	5,900

NEW MEXICO

Artesia	3,800	3,500
Hogback	500	500
Rattlesnake	300	300
Total	4,600	4,300
Total Rocky Mountain	105,655	105,950

EASTERN

	Jan. 2	Jan. 9
(Including Ill., Ind., Ky., Pa., Ohio, W. Va., and N. Y.)	102,500	101,000

PRODUCTION SUMMARY

East of Rockies	1,237,900	1,228,850
United States	1,973,050	1,963,800

Continental Buys Controlling Stock in Texhoma Company

Wichita Falls, Texas.—The Continental Oil Company of Denver has contracted to purchase the controlling stock of the Texhoma Oil & Refining Company, largest independent producer in North Texas, on a basis of $125 cash for each share of Texhoma stock, which has a par value of $100. Negotiations for the sale have been conducted intermittently by the officers of the two companies since last July, and an agreement on the terms of the deal was made Saturday evening in Wichita Falls during a meeting of Texhoma officials and W. H. Ferguson of Denver, vice-president of Continental. According to the terms of the contract, Texhoma officials are to deliver in New York on or before February 1, 1926, 80 per cent, or more of the 60,000 shares of Texhoma stock, thereby representing a consideration of not less than $6,000,000 cash for the control of the properties.

The Texhoma Oil & Refining Company's properties represent a complete link in the oil industry, having a gross crude production in North Texas amounting to 5,520 barrels daily; pipe lines; refinery and cracking units; natural gasoline plants; and wholesale and retail gasoline stations throughout North Texas. These properties are ideally located to tie into those owned by Continental in the Mountain States, and Mid-Continent. Continental has been active in producing oil in Texas for a number of years, and has production in the Gulf Coast region, Mexia-Corsicana district, and in North Texas, with state headquarters at Fort Worth under the management of Walter Alexander.

The offer of $125 cash for each share of Texhoma stock by Continental is open to the minority stockholders as well as the majority, which is controlled by the officials of the company. In the event Continental succeeds in buying up all the outstanding stock of the Texhoma, the consideration paid for the properties will amount to $7,500,000.

Until the transfer of the stock and control of the Texhoma properties are consummated in New York, the Texhoma organization will function as heretofore, and after that date it is understood that the name of the company will be retained with operations conducted as a subsidiary of Continental Oil Company. No announcement has been made as to whether Texas headquarters will be located at Wichita Falls or Fort Worth.

Louisiana-Arkansas Operators Have Best Year

(Continued from page 48)

cated near the crest of the structure, in section 22-21-10 and within three eights of a mile, northwest of the Palmer well. With the conclusion of these four important deep tests, it is very probable that the value of the newly-found deep pay will have been ascertained with a greater degree of certainty.

Four Producing Sands at Bellevue

The Bellevue Shallow Field, in township 19-11 ,of Bossier Parish, was discovered by R. O. Roy and associates, of Shreveport, in November, 1921, at the culmination of one of the most thorough wildcatting campaigns ever conducted in this territory. The Nacatoch sand was selected as a guide, or marker, in a drilling campaign which originally had the deeper sands as a goal; and a large number of shallow test-holes were drilled to define the structure. In one of the earlier test wells, located in section 7-19-11, a small oil production was developed in the Woodbine formation at a total depth of 2173 feet. Due, no doubt, to the subsequent discovery of a more fertile sand at a shallower depth, the Woodbine sand remains untested to this date, if exception is made of one deep test drilled by the Standard Oil Company on the Wyche Lease, near the northwest corner of section 14-19-11.

In tracing out the structural rise of the Nacatoch sand, Roy and his associates were led eastward from the scene of their early activities in sections 12-19-12 and 7-19-11 into section 15-19-11, where a profitable oil production was found at depths ranging from 290 to 415 feet below the surface. This horizon has proven very prolific, as the field as a whole has produced more than 7000 barrels per acre. Centrally-located properties have yielded in excess of 13,000 barrels per acre.

In reviewing the prospects for additional production from the deeper sands of the Bellevue Field, we find that, since this magnificent structure is one of the most prominent features of the great Sabine Uplift, the potentially productive formations may be found there at very much shallower depths than in any other known locality in Louisiana or Arkansas. Thus, it should share very prominently in the attention to be accorded the deep sands during 1926, if for no other reason than that drilling there is less expensive than at Pine Island, Cotton Valley, and elsewhere.

As stated above, the Nacatoch sand is proven and the Woodbine sand is known to contain oil in greater or less quantity. The Standard Oil Company of Louisiana has developed commercial gas production from the Blossom sand at 1036 feet in its Kendrick A-1, in section 22, and from the Trinity sand at 2644 feet in its Moorey No. 1, near the center of section 28, both in township 19-11. Of four different formations known to contain oil and/or gas, only one has been developed on a commercial scale.

For this reason, it would seem that Bellevue's untested sands should be in line for early development. However, the writer has heard of no definite plans for a resumption of drilling in that district in the near future. The greater part of the close-in acreage is owned by the Standard Oil Company of Louisiana, the Louisiana Oil Refining Corporation, Gulf Refining Company, Humble Oil & Refining Company, and Bliss & Wetherbee.

Lubricating oils made from Bellevue crude, which tests 90 degrees Baume as it comes from the wells, are said to possess qualities in one homogenious oil which otherwise are obtained only by the blending of asphalt and paraffin base oils. According to refiners, its chief virtues are that it will not congeal at low temperatures and will not burn at high temperatures. The value of this low-gravity oil was not recognized until about two years ago, however; and the bulk of the flush production was marketed at prices ranging from 75 cents to $1.00 per barrel. During 1924 and 1925 it enjoyed a keenly competitive market; and it now ranks with Grade "A" Gulf Coastal crude in the manufacture of lubricants. At current postings, Bellevue oil is worth $1.65 per barrel, as compared with a quotation of $1.50 per barrel for the South Texas product with which it competes. The Bellevue field is served by pipe lines owned by the Standard Oil Company of Louisiana and by gathering lines and loading racks owned by the Gulf Refining Company and the Dixie Oil Company.

Deep Sand Activity

The Haynesville field, located in the northern part of Claiborne Parish and near the Homer, Cotton Valley, Shongaloo, and Bellevue fields, has produced more than 43 million barrels of pipe line oil since its discovery in March of 1921. Production is from the Blossom sand at 2800 feet. The field as a whole has yielded an average of 6364 barrels per acre, although the more fertile properties located near the crest of the structure have produced upward of 29,000 barrels per acre.

Several deep tests have been made in "edge wells" located at or near extremities of the field, which proved barren in the Blossom sand and, likewise, in the Woodbine. However, the Woodbine, Trinity, and other deeply-buried beds have not as yet been penetrated by the drill at any point on or near the crest of the structure as defined with reference to the Blossom sand. The remarkable success of the jointly-financed deep test drilled at Cotton Valley having blazed the trail and established a precedent for co-operative effort among the oil producers of this district, it is considered very likely that arrangements may be perfected early in 1926 for the drilling of a community deep test at Haynesville. In fact, it is rumored that tentative plans already are under consideration. The Haynesville structure is just across the parish line from the Cotton Valley field, where gas production and a spray of oil has been found at depth of 4300 feet; and, for this reason, both Haynesville and Shongaloo, another nearby structure, should share equally with Cotton Valley in the prospects for deeper oil and gas production.

The Blossom sand production at Haynesville averages around 36 degrees Baume, and ranks along with Homer and El Dorado crudes in the demand for light oil. It yields approximately 17 per cent gasoline and 23 per cent kerosene.

The Ohio Oil Company, owner of about one half the acreage contained in the original Smitherman block, has a current daily average production of about 6350 barrels, net. The Louisiana Oil Refining Corporation and the Gilliland Oil Company, which share about equally in the ownership of the remainder of the discoverer's block, are now producing around 1350 and 950 barrels per day, respectively.

Deep Drilling

The De Soto-Red River District, considered as a whole and including the producing fields at Naborton, Abington, Crichton, and Bull Bayou, has yielded a total of more than 45 million barrels of oil since the discovery of gas in the Nacatoch and oil in the Woodbine sand during 1913. The Woodbine formation is the principle source of oil production in this district, although wells drilled deeper and into the Comanche beds have yielded gas in large volume, and other wells drilled still deeper have encountered showings of oil.

The Blossom sand, lying below the chalk rock and above the Woodbine pay, was ignored during the development of the De Soto-Red River fields, as, at that early date, opeartors did not know as much of the geology of this area as has been learned during the last decade and it was regarded as a barren salt water sand, despite the fact that it showed gas at high pressure. The same oversight occurred at Elm Grove, in Bossier Parish, although the once-despised Blossom sand has since been found to be productive of oil there. Likewise, there is believed to be every possibility that the Blossom sand may yet be found to contain oil and gas in greater or less quantities in the fields of De Soto and Red River parishes.

Vastly more alluring, however, are the prospects of the Comanche beds (Lower Cretaceous series), consisting of more than 2500 feet of lime and shale with intervening beds of sand and hard rock found in such relative position as is believed to be favorable for the origin and accumlatoin of oil and gas. The De Soto-Red River fields, being located on the Sabine Uplift, are in an area where drillers may expect to encounter the untested sands of the Lower Cretaceous series at

shallower levels than elsewhere, except at Bellevue. Therefore, these fields have been selected as the scene of some of the initial efforts of the deep drilling campaign.

Attention was directed in a foregoing paragraph to the Gulf Refining Company's Williams deep test, near Naborton, in which drilling is still in progress at a total depth of 5895 feet. The Dixie Oil Company has recently cemented 8¼-inch casing at 3293 feet in its Jenkins deep test, located in section 9-12-11 of the same general vicinity.

30,000 Barrels Per Acre

The Homer field, discovered in 1919 when light oil was worth more than three dollars per barrel, and known in the heyday of post-war speculative frenzy as Louisiana's "Wonder Pool," has accounted for more than 53 million barrels of oil. Production is from both the Nacatoch and Blossom sands; and a remarkable yield of more than 17,600 barrels per acre has been obtained. Favorably located individual properties have produced as much as 30,000 barrels of oil per acre from the shallow sand.

Homer undoubtedly will share with the other proven structures of Louisiana and Arkansas in the revival of interest which has followed the discovery of oil and gas in the sands of the Lower Cretaceous at Pine Island.

Urania Important Discovery

The Urania District, of La Salle and Winn parishes, in which is located Louisiana's newest oil field, was discovered at length in an article published in the issue of last week. Aside and apart from its interesting features as a new oil field, however, is the important fact that it marks the discovery of the first commercial oil production from the Eocene series in this territory. By virtue of this late find, a vast territory lying south of the Sabine Uplift and hitherto disregarded in the search for oil because the sands which produce oil elsewhere lie too deeply buried to be reached by the drill, is to be reconsidered in a far more favorable light since the finding of oil in a younger formation and at a comparatively shallow depth. Recent achievements at Pine Island and Cotton Valley point the way toward deeper drilling on all the known structures located on and near the Sabine Uplift, but the discovery of oil at Urania suggests the advisability of shallow prospect drilling over an extensive area which formerly was not favorably considered.

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

Summarized Review of Field Results

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Product'n This Week	Initial Product'n Last Week
Arkansas	29	11	12	8	1	2	16	1	715	1,365
California	15	..	14	..	..	..	1	..	4,225	.....
Colorado	..	..	..	..	..	..	..	..	....	.....
Indiana	10	..	3	..	3	..	4	..	34	.....
Illinois	13	4	9	4	..	..	4	..	1,207	192
Kansas	27	15	15	7	2	..	10	8	1,445	375
Kentucky	30	39	21	28	..	2	9	9	220	261
Louisiana	11	13	6	8	3	..	2	5	187	773
Michigan	..	..	..	..	..	..	..	..	....	.....
Mississippi	..	..	..	..	..	..	..	..	....	.....
Montana	6	1	5	1	..	..	1	..	475	120
New York	7	1	7	1	..	..	..	..	27	35
New Mexico	2	..	2	..	..	..	..	..	140	.....
Ohio	29	35	18	26	..	3	11	7	350	422
Oklahoma	65	80	34	46	5	13	26	21	4,748	16,371
Pennsylvania	41	10	33	3	5	7	3	..	149	8
Tennessee	..	2	..	..	..	..	..	2	....	.....
Texas	92	107	48	56	3	7	41	44	16,214	6,011
Utah	..	..	..	..	..	..	..	..	....	.....
West Virginia	31	51	11	12	17	27	3	12	197	161
Wyoming	4	1	2	1	..	..	2	..	365	200
Totals	412	371	240	201	39	61	133	109	30,698	26,294

NOTE—Following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; abn—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; loc—location; m—milling N. S. E. W.—North, South, East, West; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—under reaming; wo—workover; wosr—waiting on standard rig.

Texas

ARCHER COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Atlantic Oil Prod. Co. Plowman 1	*	1450
Burns-Maxson et al McCrory Estate 1	100	1587
B. F. Caldwell et al Hutcherson 3	*	1430
Craig-Wilson et al Andrews 1	*	1100
Gulf Prod. Co. D. McWhorter 1	*	1415
Oil Investment Fee 17	5	1107
Independent O. & G. Co. D. L. Wolf 2	15	1315
D. L. Wolf 3	15	1314
Kentucky Oil Corp. Miller 3	10	906
T. G. Lomax et al L. F. Wilson 11	50	1538
Magnolia Pet. Co. May Rutty 5	125	898
Murchison-Fain Oil Co. Talbot 1	*	1501
J. J. Perkins et al Anderson 9	180	1414
Waite Phillips Co. L. F. Wilson 3-A	*	1732
Pandem Oil Corp. J. R. Parkey 1	*	1800
Staley-Wynne et al L. F. Wilson 14-C	10	1423
Texhoma (Continental) O. & R. Co. S. E. Oldham 5	100	1363
Abercrombie-Taylor 2	*	1575
Trinity-Townsite Co. Fee 2	200	1409
Trio Production Co. Brom 9	30	1421

BAYLOR COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Shaw-Rathke et al Mills 6	*	1421

CALLAHAN COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Brannon-Murray et al Blk. 28, Townsite 1	200	1449
Mitchell-May & Jones, Blk. 15, Townsite 1	*	793

CLAY COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Holman Cook-McElreath et al Myers 2	*	392

MONTAGUE COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Benton-Woods et al R. Hinds 1	90	963
Texhoma (Continental) O. & R. Co. Howard 7	100	1170

BROWN COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Conway Bros. et al Clark 2	*	1379
Eastland Oil Co. Stone 1	*	1510
Infield Petroleum Co. Graham 1	*	2059
Sudderth et al Byrd 1	15	1353

BURKBURNETT

Company, Well and Location	Initial Production Bbls.	Depth
Magnolia Pet. Co. J. H. Anderson 16	1	1860
S. L. C. Pratt 13	5	814

ELECTRA

Company, Well and Location	Initial Production Bbls.	Depth
Madison O. & G. Co. Burnett 13	70	1515
Magnolia Pet. Co. Honaker 69	15	1946

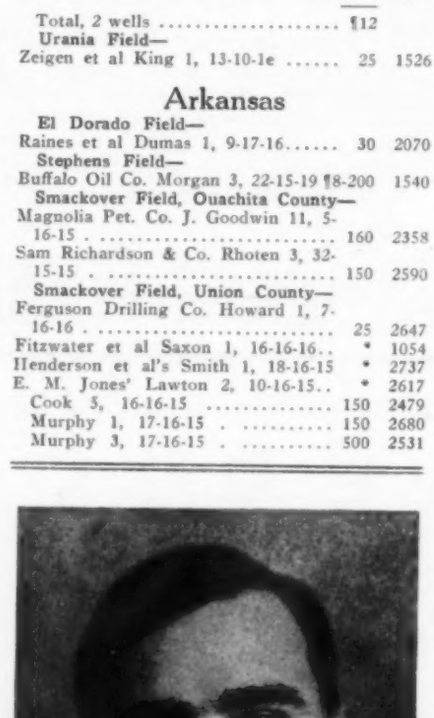
Company, Well and Location	Initial Production Bbls.	Depth
Perkins-Cullum et al Beaver Royalty Fee 3	120	1612
Ryan Pet. Corp. G. E. Nance 49	15	487
G. E. Nance 50	*	505
Shappell Oil Co. McCarty 3-A	8	488
McCarty 4-A	15	484
McCarty 5-A	*	500
McCarty 6-A	*	745
McCarty 5-B	30	1205
K-M-A AND IOWA PARK		
Magnolia Pet. Co. Maer et al 32	*	1258
O'Donohoe-Gates et al Pratt 2	*	1922
Dan Rubsam et al Chilson 2	*	780
EASTLAND COUNTY		
Magnolia Pet. Co. Chas. Allman 10	*	1867
Woods et al Collins 1-B	¶3	932
Hickok Prod. & Dev. Co. Amis 1	¶4½	3206
SHACKELFORD COUNTY		
Humble O. & R. Co. McLemore 1	*	4119
Lake-Thackston et al Black Bros. 1	*	1202
Milham Corp. Clausell 8	¶½	306
Casey 1	*	670
SOUTH VERNON DISTRICT		
Humble O. & R. Co. Castlebury 22	45	1925
W. T. Waggoner 2-I	300	1886
C. F. Kolp et al Waggoner 11	5	1355
Landreth Prod. Corp. Waggoner 9-D	240	1918
South Vernon Oil Co. Bond 1	*	1377
Staley-Wynne et al Stephens 8	†	2287
W. D. Wells et al Waggoner 1	*	2006
YOUNG COUNTY		
Bashara et al Marshall 1	*	718
C. G. & C. Oil Co. Keathley 4-B	*	1012
Gulf Prod. Co. Campbell 1-A	35	915
Harris et al Sims 1	*	850
Suggett-O'Neal et al Perkins 1	*	1001
The Texas Co. Barry 1	*	1334
Texas Unity Oil Co. Watson 1	*	1001
Tidal & Hoffer Oil Corp. Campbell 13	*	1427
Wolf et al Leberman 1	*	1150
THROCKMORTON COUNTY		
Associated Oil Co. Cummings 1	*	3300
Bruce Larkin et al Richards 1-dd	*	4294
McDannald-Smith et al Upshur County Fee 1	*	1652
GULF COAST		
Saratoga—		
Vacuum Oil Co. Teel 2	*	3615
Batson—		
Sterline Oil Co. Hooks 2	15	1580
Gulf Prod. Co. Stuart R. Smith et al A-1	150	3200
Goose Creek—		
Gulf Prod. Co. Beaumont Pet. Co. State 32	100	2250
Humble Oil & Ref. Co. Gaillard Penn. 32	300	4325
Hull—		
Gulf Prod. Co. Phoenix Dev. Co. 61	1000	3450
Republic Prod. Co. Dolbear 24, wo.	250	2350
Dolbear 36, wo	50	2390
Humble Oil and Ref. Co. Merchant 4, wo	60	4190
Empire Gas & Fuel Company Barngrover 17	200	3065
Higgins Oil & Fuel Co. Taylor 5, wo	175	4310
Humble Oil & Ref. Co. Guedry 19	2200	3100
Orange—		
Humble Oil & Ref. Co. Chesson 24-B	1200	4670
Rycade Oil Corp. State B-14	3300	4650
South Liberty—		
Gulf Prod. Co. F. Antoine 5	*	3500
Spindle Top—		
Gulf Prod. Co. Gladys 216, wo	15	875
TEXAS MISCELLANEOUS		
Luling—		
United North and South Oil Co. McKean 20	300	....
SOUTH LOUISIANA		
Evangeline—		
The Texas Co. Latreille 58, wo	20	1920
Vinton—		
Gulf Ref. Co. of Louisiana G. & N. G., wo	30	2400

Louisiana

Company, Well and Location	Initial Production Bbls.	Depth
Caddo Parish—		
Fortuna Oil Co.'s Raines 20, 22-21-15	2	1620
D. C. Richardson Youree-Randolph 1, 13-20-15	¶15	2258
The Texas Co. Herold 6, 14-21-15	70	1645
Total, 3 wells	¶15-72	
Cotton Valley Field—		
Woodley Pet. Co. Gray B-3, 27-21-10	40	2556
Monroe Gas Field—		
Palmer Corp. Cole 1, 36-20-4e, Ouachita Parish	¶8	2175
United Carbon Co. Gray 1, 16-20-5e	¶4	2302
Total, 2 wells	¶12	
Urania Field—		
Zeigen et al King 1, 13-10-1e	25	1526

Arkansas

Company, Well and Location	Initial Production Bbls.	Depth
El Dorado Field—		
Raines et al Dumas 1, 9-17-16	30	2070
Stephens Field—		
Buffalo Oil Co. Morgan 3, 22-15-19	¶8-200	1540
Smackover Field, Ouachita County—		
Magnolia Pet. Co. J. Goodwin 11, 5-16-15	160	2358
Sam Richardson & Co. Rhoten 3, 32-15-15	150	2590
Smackover Field, Union County—		
Ferguson Drilling Co. Howard 1, 7-16-16	25	2647
Fitzwater et al Saxon 1, 16-16-16	*	1054
Henderson et al's Smith 1, 18-16-15	*	2737
E. M. Jones' Lawton 2, 10-16-15	*	2617
Cook 5, 16-16-15	150	2479
Murphy 1, 17-16-15	150	2680
Murphy 3, 17-16-15	500	2531



This is John Teer, new vice-president and general manager of the Layne & Bowler Company, Houston, manufacturers of oil well screen, and other specialties. Mr. Teer was appointed vice-president and general manager effective January first. Prior to that time he was, for two years, general superintendent and director of production of the Reed Roller Bit Company, Houston. He is well known and well liked in the oil fields and among supply companies, having been in the supply business for more than fifteen years. For twelve years he was with the Lucey Manufacturing Corporation. Mr. Teer was born in Lufkin, Texas. He is married and has two children, a boy and a girl.

Company, Well and Location	Initial Production Bbls.	Depth
Lion Oil & Ref. Co.'s Murphy A-10, 7-16-15	*	2422
Murphy A-12, 7-16-15	100	2392
Magnolia Pet. Co.'s Scott 3, 12-16-17	30	2359
Marine Oil Co.'s Murphy 5, 15-16-15	¶30	2707
Phillips Pet. Co.'s Alphin 5, 11-16-15	*	2657
Sun Oil Co.'s Hatfield 6, 6-16-15	*	2431
Hays 18, 3-16-15	*	2591
Thurman et al's Tatum A-1, 7-16-15	250	2564
Total, 17 wells	¶30-1515	
El Dorado East Field—		
Braswell et al's Doss 1, 16-17-14	*	2168
Dobbs et al's Kelly 1, 9-17-14	*	27
Pat Marr's Moody 1, 16-17-14	*	3004
Norris et al's Pardue 1, 4-17-14	*	2050
Wingfield et al's Tuffts 1, 18-17-14	*	2853
Irma Field, Nevada County—		
Greeson et al's Ellis 1, 2-14-21	200	1156

Mountain States

WYOMING

Company, Well and Location	Initial Production Bbls.	Depth
Black Mountain—		
Utah Oil Refining Co.'s No. 4, 25-43-91	350	3242
Pilot Butte—		
Argo Oil Co.'s No. 8-DE 27-3-1	15	2750
Allen Lake—		
Texas Production Co. No. 1, SW¼ 18-22-78	*	1950
Powder River—		
Midwest Ref. Co. No. 16-J, NW¼ 25-36-85	*	....

MONTANA

Company, Well and Location	Initial Production Bbls.	Depth
Kevin-Sunburst—		
Big West Oil Co.'s No. 16-A, NE¼ 31-35-1	310	1470
Wilson Oil Co.'s No. 1-B, SW¼ 25-35-2	70	1510
Absaroka Oil Co.'s No. 1-R	*	2480
Ohio Oil Co.'s 2-K, 15-35-2	10	1520
No. 1-H, 21-35-1	20	1600
Cat Creek—		
Mid-Northern Oil Co.'s No. 22	65	....

NEW MEXICO

Company, Well and Location	Initial Production Bbls.	Depth
Artesia—		
Ohio Oil Co.'s No. 2-D, 4-18-28	75	2350
No. 6-N, 4-18-28	65	2350

California

Company, Well and Location	Initial Production Bbls.	Depth
Long Beach—		
Arhtur Delaney's Los Cerritos 5	170	4364
Lindauer Oil Co.'s Cerritos 2	500	4294
James O'Donnell's Cerritos 47	200	4597
Athens-Rosecrans—		
W. H. Fisher's Athens 8	500	5238
General Pet. Corp.'s Vaughn 1-A, wo	600	4720
E. A. Parkford's Athens 1, wo	326	5248
Baldwin Hills-Inglewood—		
Pacific Oil Co.'s Baldwin 28	450	1725
Standard Oil Co.'s Vickers 2-3, wo	80	2207
Vickers 2-9, wo	130	2720
Torrance—		
California Pet. Corp.'s Cravens 3	54	3600
Huntington Beach—		
Standard Oil Co.'s B-39	715	4425
B-37	100	4492
Santa Fe Springs—		
California Pet. Corp.'s Wickman 2	*	3080
Midway District—		
Federal Drilling Co.'s No. 11	200	4966
Sunset District—		
United Oil Co.'s Transport 1	200	3762

Oklahoma

Company, Well and Location	Initial Production Bbls.	Depth
Carter County—		
Amerada Pet. Co. Clay 20, C N L S½ S½ NE 28-5-1	35	1078
Creek County—		
Whitten et al Noble 1, SEc NW 5-19-8	10	2000
Devonian Oil Co. Miller 1, SEc NE, 14-19-8	100	2893
W. Phillips Cobb 1, SWc NE SW 26-17-8	350	3211
Kennedy et al Strip 2, SWc NW NE NW 6-18-12	20	1598
Wilcox O. & G. Co. Bucktrot 1, SEc 27-17-10	60	2514

Company, Well, Location—	Initial Production Bbls.	Depth
H. E. Williams Hawkins 1, SWc SE 10-17-11	10	1696
C. G. Tibbens Unallotted 10, C SE NW 30-15-9	240	3048
T. E. Mann et al Maxey 2, C W L SW NE 5-19-8	*	....
T. B. Slick No. 1, SWc NE 5-19-8	*	....
Texas Co. Fields 1, NWc 28-15-9	*	3754
Darby Pet. Co. & Burk Greis, Kimble & Reading 1, C E L SE NW 33-14-10	*	3419
Grady County—		
Briscoe & Hall Reed 3 SEc NE NW NW 25-5-8, owd	¶39	2328
Hughes County—		
Carter Oil Co. & Sand Pet. Co. Cain 3, C NE NW SE 1-9-9	170	3421
Dixie Oil Co. Larney 1-A, C NE NE NE 11-8-8	*	3464
Roxana Pet. Corp. Herrod 1, C. SW NW NE 12-8-8	*	3406
Bulling 3, C NE NE NW 35-8-8	*	3161
Gypsy Oil Co. Jefferson 2, C NE SW NW 35-8-8	*	4223
Jefferson County—		
Gypsy Oil Co. Busby 1, C SW SE SE 18-7-5	¶50	603
Jackson County—		
J. A. Abernathy Snodgrass 1, C NW NW 15-1-23	*	3550
Kay County—		
Comar Oil Co. Harvell 6, SWc NW NE 21-29-1	111	2082
McCormick 6, SEc NW SE 21-29-1	220	1952
Prairie O. & G. Co. McMillen 1, SEc NE SE 20-25-2	*	478
Lincoln County—		
Pure Oil Co. Jefferson 5 NEc SE SW 35-15-5	110	3372
Amerada Pet. Crop. Belless 2, C NW NE SW 3-14-5	45	3467
Marshall County—		
McQuinn et al Arbuckle 1, SWc SE SE 26-5-5	*	705
Okfuskee County—		
Mid-Continent Pet. Corp. Simon 1, C NE NE NE 21-10-9	¶50	3312
White Eagle Oil & Ref. Co. Lasley 1, C NW SW SE 31-10-11	*	3250
Okmulgee County—		
Independent O. & G. Co. Wilson 2, NEc NW SE 7-12-12	60	2473
Marion & Co. Wilson 4, SEc SW NE 7-12-12	50	2521
Sheldon-Houston Oil Co. Smith 1, SWc SE SE 35-14-12	*	2857
J. A. Swindler & Son Lewis 4, C N L SW NE 25-13-11	*	3255
Osage County—		
Continental Oil Co. No. 1, SEc NW 5-25-8	*	2994
I. T. I. O. Co. No. 16, NEc NW NE SE 15-29-10	85	1110
A. G. Oliphant No. 1, SEc NE 15-29-10	50	1110
Phillips Pet. Co. No. 7, C NW SE SE 2-27-5	500	2991
Skelly Oil Co. No. 5 SEc NE SE SW 2-27-5	125	3005
Phillips-Peters No. 2, C SW NW SW 17-27-6	350	2990
Osage County—		
Peters-Oliphant 3, C NW NW NW 17-27-6	570	2986
Texas Co. 5, C N L S½ N½ SE 29-25-8	5	2495
Atlantic Oil Prod. Co. No. 1, C S L SW SE 12-24-8	15	2057
Peters Pet. Co. No. 3, SWc NE 32-24-9	30	1509
Skelly & Moore No. 6, NWc NE NW NE 2-21-8	60	2380
Pawnee County—		
J. B. Grieves, Anglin 6, SWc SE NW 31-21-8	125	2616
Adamson Oil & Gas Co. Sigan 7, C E L W½ NW SW 32-21-8, owd	150	2934
Selby Oil & G. Co. and Gypsy Oil Co. Mullendore 21, NEc NW NW NW 1-20-7	60	2847
J. Sheltz et al Martin 2, SWc NW NE 7-20-8	35	2314
Mid-Kansas O. & G. Co. Vanator 1, NEc NW SW 34-24-5	*	3743
Sun Ray Oil Co. Incas 1, SEc NW 8-20-7	*	2980
Payne County—		
Magnolia Pet. Co. Chevelier 11, C SW SE 27-19-4	¶¼	668
Deep Rock O. & G. Co. Goodno 3, C SW SE NE 23-18-3	12	4287
Derry 2, NEc NW SE 23-18-3	225	4282
Shaffer O. & R. Co., Laughlin 7, C W L NW NE 2-18-5, owd	50	3466
Seminole County—		
Continental Oil Co. Williams 2, C SW SE SW 28-11-8	650	3407
W. R. Ramsey Logan 3, C S L NE NE 36-8-7	60	3165
Texas Co. Thomas 1, C NE NE SW 15-8-7	*	4404
Stephens County—		
Knox Pet. Co. & Owl Oil Co. Dyal 1, SWc NE 7-1-8	*	2779
Grant et al's Shelton 13, C W L NE NW SE 32-1-8	*	2050
Tulsa County—		
Sand Springs Home, Page 1, C SE NE SW 3-19-11	*	2283
Nowata Oil & Ref. Co. Bodrey 3, C NE SE 30-19-12	*	2223
Independent O. & G. Co. Pemberton 1, SEc NW 16-16-13	*	2268
Wagoner County—		
Mitchell, Prince 1, NWc SW SW SE 35-17-16	¶8	675
Skeeter Oil & Gas Co. Cully 5, C S L N½ SE NE SE 16-17-16	*	850
Neal & Cartwright, Bruner 1, NEc 19-17-16	*	1010
Carter, Childers 1, NEc NW NW 23-17-16	*	850

Kansas

Company, Well and Location	Initial Producers Bbls.	Depth
Butler County—		
Empire G. & F. Co. Houston 14, C NE SW 19-25-5	45	2672
Magnolia Pet. Co. Skaer 2, SWc NW SW SW 25-27-4	20	2033
Branson et al, Beedles 1, NEc SE NE 5-27-6, owd	25	2757
Amerada Pet. Corp. Dungey 1, SEc NW SE 22-27-7	32	2694
Cowley County—		
Carter Oil Co. Waite 8, SEc NW SE 19-32-3	135	2621
W. Phillips & Marland, Thurlow 5, NWc SE SE 17-33-3 6	150	3197
Snyder 6, NEc SE SW 21-33-3	200	3282
Roxana Pet. Corp. Chaplin 1, SEc SW SE 16-34-3	¶1½	1435
Chautauqua County—		
Manning, Street et al, Hazelton 1, NEc SE SE 15-32-10	*	2095
Elk County—		
Anderson Bros. Longston 2, C NE SE 16-31-9	¶7	1452
Pure Oil Co., Chaffine 8, C W L SW SE 14-31-10	50	1370
Southwestern Gas Company, Webb 10, C S L SW NE 14-31-10	50	1348
Theta Oil Co., Walker 4, SEc NE NE 27-31-10	20	1369
Barber & Lemon, Perkins 1, C NW NE 33-29-9	*	1549
W. A. Reed, Mullendore 2, C N L SE SW 3-30-9	*	2305
Gillespie, Walker 1, SEc NW 27-31-10	*	1443
Greenwood County—		
Empire G. & F. Co., Duby 3, NEc NW SW 14-22-11	50	1904
Scott 7, C E L NE SE 24-23-8	25	2596
Hayes Robertson et al, Scott 9, NWc NE 25-23-8	150	2597
Haverhill Pet. Co., Inthrum 1, SEc NE SE SE 4-23-13	25	1608
Syndicate Oil Co., Bradfield 1, SEc SW NE 2-22-10	*	2160
Roth, Faurot & Mission O. Co., Scott 3-A, SEc NW SE SE 22-23-10	*	2263
Phillips Pet. Co., Hover 8, SEc NE NW SW 3-25-9	*	....
Harvey County—		
S. A. Hunter, Symons 1, SEc 27-22-2	*	1200
Purdy et al, Almaugh 1, SWc NE 4-24-1	*	....
Russell County—		
Valerius Oil & Gas Co., Sutton 7, SWc SE SW 5-12-15	175	2912
Sumner County—		
McKenna et al, Waggoner 1, SEc NW 12-30-1	*	3752

Eastern States

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
Bradford Field—		
South Penn Oil Co. Bingham 481, tract 21	7	....
Bingham 494, tract 44	8	....
Bingham 408, tract 13	5	....
Rounds & Lawrence 49	12	....
Leasure 1	7	....
Whipple 1	3	....
Hodge 1	3	....
Dana & Dana Dana 1	7	....
Hazlewood Oil Co. Bingham 370, tract 14	7	....
Associated Producers Co. Bingham 590, tract 362	3	....
Mrs. Joseph T. Jones Drake 1	5	....
A. W. McCandless Bros. McCandless 8	7	....
S. H. Elder & Co. Elder 8	5	....
Devore & Potter Marvin 1	4	....
Nesselson Bros. Nesselson 1	5	....
Howard Wile Howard Wile 12	3	....
Petroleum Reclamation Co. Pratt 9	3	....
R. C. Lloyd Ekas 7	3	....
W. E. Williams Williams 17	5	....
Kennedy Co. Bingham 129, tract 57	2	....
L. M. & A. L. Lilly Middaugh 4	4	....
Venango County—		
Hogan, Lester & Co. Jones 25	2	....
Jacob Sheasley Rice 1	2	....
Rice 2	2	....
S. Y. Ramage Nicklin 64	2	....
Thompson & Rice Osmer 1	2	....
C. G. Flinspah Interests Stewart-Cotton 3	3	....
Greene County—		
Carnegie Nat. Gas Co. C. E. Day 3	¶2¼	....
Philadelphia Oil Co. John Wildman 2	¶2	....
Peoples Nat. G. Co. Ritchie-Cooper 1	*	....
Sarah Minor 1	¶1½	....
Pittsburg Coal & Gas Co. J. E. Evans 1	*	....
Butler County—		
Burns, Sherin & Co. Thompson 1	12	....
Saxonburg Light & Heat Co. Gahagan 1	7	....
American Nat. Gas Co. McNally 1	¶1¼	....
George Harger & Co. Harger 1	*	....
Clarion County—		
Roundtown Gas Co. Tingley 1	¶1	....
Alum Rock Gas Co. Garis heirs 2	2	....
Beichner 5	3	....
Center-Middle Field—		
D. Wade Irvine 2	2	....
Kane Oil Co. Lot 426, tract 1	2	....

NEW YORK

Allegany County—		
Empire Gas & Fuel Co., Ltd., Empire 1	7	....
McDermitt & Gilligan McDermitt & Co. 1	7	....
F. J. Wilson Cass 1	3	....
Phillips & Howard Phillips & Co. 1	4	....
J. M. Hughes & Co. Hughes 1	2	....
Stebbins & Atwood Barney-Graves 1	2	....
C. L. Norton & Co. Norton 1	2	....

WEST VIRGINIA

Ritchie County—		
L. R. Rinehart & Co. John Scott 3	80	....
Pittsburgh & West Virginia Gas Co. Harvey Vernon 1	20	....
South Penn Oil Co. Barbara Jamison 1	3	....
S. A. Powell heirs Kennedy heirs 1	¶1	....
F. J. Gillespie W. H. V. Jones 1	*	....
Carnegie Nat. Gas Co. F. F. Goff 3	¶¼	....
Hope Construction & Ref. Co. V. Hartman 1	*	....
Wetzel County—		
Manufacturers Light & Heat Co. L. Oats 1	¶2	....
J. Ferrell 1	¶2	....
William Riter 1	¶¼	....
Carnegie Nat. Gas Co. G. C. Miller 1	¶¼	....
Silverhill Oil Co. F. Riggenbach 1	*	....
Marshall County—		
Decem Dev. Co. Robert M. Bower 1	50	....

Company, Well, Location—	Initial Production Bbls.	Depth
Manufacturers Light & Heat Co. Frank Quigley 4	¶2	....
Carnegie Nat. Gas Co. T. J. Cole 2	10	....
Wirt County—		
Wolfe & O'Brien Waite 29	2	....
W. C. Patterson C. E. Vendevender 15	2	....
Cairo Oil Co. Cairo 2	¶1	....
Harrison County—		
South Penn Oil Co. Stephen Myers 4	10	....
Hope Natural Gas Co. William Burnside 1	¶2½	4091
Putnam County—		
Teays Producing Co. A. B. Griffith 1	10	....
Charleston-Dunbar Gas Co. Wirt Paul 3	¶½	....
Roane County—		
Ryan & Hogg S. V. Carver 2	¶1½	....
Green Creek Oil & Gas Co. Wm. E. Fields 1	¶2	....
Gilmer County—		
Star Producing Co. Henrietta Gainer 2	¶2	....
Zinn & Co. Ada Hartman 1	¶¼	....
Doddridge County—		
Keystone Oil & Gas Co. of New York Mary Shrader 1	5	....
Tyler County—		
Samuel & Gale Gale heirs 10	5	....
Kanawha County—		
Tampico Oil Co. George C. Weimer 2	¶2½	....
Calhoun County—		
Elk Oil Co. W. H. Watson 1	¶1¼	....
Clay County—		
Empire Pet. Co. A. W. Moore 2	¶¼	....

KENTUCKY

Barren County—		
Hiland Oil Co. Cassidy 11	8	....
Kopel Oil Co. H. Myers 2	8	....
Star Oil Co. Russell 5	7	481
L. J. Emery Sons Co. Richardson 2	6	....
Ziegler Bros. Drennen 10	6	500
Unkonwn Grinstead 1	*	....
T. L. Gooby John Francis 1	*	701
Owensboro District—		
Chicago Pet. Synd. Ira Crows 4	40	....
Panther Creek Oil Co. J. W. Smith 11	12	....
Pennsylvania-Indiana Oil Co. W. P. Griffith 1	10	....
Leeper Oil Co. J. S. Collier 5	11	....
Foster Oil Co. Keith 1	*	....
Lawrence-Johnson Counties—		
W. M. Stone & Co. Ira Lester 8	10	....
Union Gas & Oil Co. Sanford Lyon 25	20	....
C. E. Fraley 9	7	....
C. K. Dobyne No. 1, tract 22	7	....
W. D. Lester 9	5	....
Warren County—		
Wood Oil Co. Davenport 23	*	1000
Wood Oil Co. Grimes 11	10	1100
P. H. Lavelle W. P. Hutton 7	20	1075
Wayne County—		
Illiken Oil Co. Samuel Hemminger 3	8	....
J. C. Marsh & Co. Charles Harmon 1	*	....
Dave Adkins Dave Adkins 1	*	....
Johnson-Magoffin Counties—		
Hudson & Collins Oscor Wheeler 6	4	....
Petroleum Exploration Co. Mary Borders 2	8	....
Lee-Owsley Counties—		
Kentucky-Indiana Oil Co. Huntington 7	8	....
Estill County—		
Mountain Spring Oil Co. J. R. Rogers 9	5	....
Allen County—		
Vic DeCaigney S. & K. Watton 5	*	440
Wolfe County—		
Petroleum Exploration Co. 600 acres 10	*	....
Morgan County—		
Collier & Spurgeon 1	*	1800

SOUTHEASTERN OHIO

Morgan County—		
The Sun Co. C. W. Swyster 13	10	1225
C. W. Swyster 14	25	....
The Pure Oil Co. George J. Fry 7	20	....
W. R. Metcalf & Co. Laura Worthington 7	5	....
Laura Worthington 8	4	....
Noble County—		
Orton G. Dunn & Co. Louis Garnett 1	*	....
Washington-Noble Oil & Gas Co. Dave Walters 1	*	4377
T. A. Clark & Co. Adam Shriver 2	*	500
Columbiana County—		
David Maxwell & Co. Raymond Miller 2	4	....
Harrison County—		
John C. Arthurs & Co. Lee Patterson 4	2	....
Washington County—		
Logan Gas Co. Anna Garrity 1	*	....
Guernsey County—		
Ohio Fuel Gas Co. R. Nelson Jr. 1	*	4915

CENTRAL OHIO

Licking County—		
A. H. Heisey Gas Co. B. V. & Lucy Weekley 4	100	....
The Pure Oil Co. J. H. Farmer 3	40	....
Wehrle Interests J. Q. Hickman 3	*	....
Wayne County—		
The Ohio Oil Co. Peter Shelley 4	75	....
Klise-Eckstein-McCann Co. M. Fulton 1	*	....
Hocking County—		
Preston Oil Co. Beatty & Co. 4	3	....
W. C. Adair & Co. C. W. Riggs 1	*	....
Athens County—		
Walden & Co. Jones heirs 1	*	....
Dunham Bros. W. P. Barrows 1	*	....
Knox County—		
East Ohio Gas Co. Charles Scholes 10	3	....
Perry County—		
Ohio Fuel Gas Co. C. C. Henderson 1	*	....

NORTHWESTERN OHIO

Shelby County—		
W. E. McKelvy H. Wiseman 3	15	....
Slagel & Johnston A. Barnhorst 1	15	....
Mercer County—		
J. H. Wilson H. Lechner 5	5	1201
Sam W. Tate, Jr., Rose Fecher 2	5	1191
Hardin County—		
Cockley Oil Co. W. B. Cockley & Co. 1	20	1449
Van Wert County—		
A. C. Grace & Co. G. W. Crone 3	4	1243

INDIANA

Sullivan County—		
Ohio Oil & Kennedy Josephine Dix 19	¶2	2310
Fred Bays E. W. Bryan 1	¶¼	587
Hollingsworth & Co. J. T. Harrison 3	*	640
Delaware County —		
De Soto Oil Synd. & Co. J. W. Goings heirs 9	*	....
Hoke, Sargent & Co. Levi Booker 1	*	....
Adams County—		
George S. Lacknett W. F. Johnson 3	20	....
Wells County—		
Fountain City Oil & Gas Co. Sarah J. Irwin 2	5	....
Jay County—		
J. J. Adams D. W. Callahan 9	4	....
Pike County—		
A. B. Bement Claude Lovless 4	¶1½	....
Gibson County—		
J. H. Young & Co. J. W. Krusemeyer 1	*	1502

ILLINOIS

Wabash County—		
Adams Corner Oil Co. Mack Madden 4	190	1424
Mack Madden 5	200	1442
Mount Carmel Oil Co. F. M. Leek 2	160	....
F. M. Leek 3	200	....
Sargent, Hartman & Co. Joseph Stillwell 3	190	1422
C. H. Parrott Bros. James Kogan 1	160	1395
Wabash Oil Co. S. J. Stillwell 5	55	1396
Joe S. Young Jr. & Co. H. A. Fox 5	50	....
Donathan & Co. M. Shaffer 1	*	1540
Phipps & Blosser J. H. McClain 1	*	1392
J. Diver & Co. H. Johnston 1	*	1392
Cumberland County—		
Campbell, Peck & Co. M. Clements 1	2	641
Clark County—		
B. H. Meaton & Co. John Laigner 4	*	....

WILDCATS FROM ALL SECTIONS

Central West Texas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Reagan County—		
Texon Oil & Land Co. University 34	2420	2944
University 36	1280	3010
Sterling County—		
White Eagle O. & R. Co. H. M. Mills 1	*	3259

DRILLING REPORT

COKE COUNTY—Lipan Oil Co.'s E. C. Rawlings 1, dk.

CRANE COUNTY—Cordona Oil & Potash Co.'s Jax Cowden 1, sd 3571 ft. J. S. Cosden et al's Connel 1, lcn. Church-Fields et al's University 1, spd and sd. Independent O. & G. Co.'s Len Taylor 1, rig. Marland Oil Co.'s Cowden 1, lcn. Penn-Texas Dev. Co.'s Jax Cowden 1, dr 2110 ft. Texas Development Co.'s Jax Cowden 1, dr 3600 ft. F. P. Zoch et al's S. Keith 1, Sec. 100, lcn.

CROCKETT COUNTY—J. S. Cosden et al's Noelke 1, dr 530 ft. J. C. Cook (Wilcox) et al's University 1, set 6⅝ cas 3225 ft, co 3250 ft; J. S. Todd 1, set 10-inch cas 1350 ft. Crockett Drilling Synd.'s J. M. Shannon 2, sd 1590 ft; Shannon 3, lcn. Cumberland O. & G. Co.'s Couch 1, spd and sd. Humphreys Corp.'s University 1, co 2000 ft. Humble & Marland Oil Co.'s L. P. Powell 1, top lime 2563 ft, dr 2595 ft. Humble's J. P. Sorg 1, dr 1750 ft. Magnolia Pet. Co.'s Shannon 1, set 15½-inch cas 615 ft. Republic Prod. Co. & Marland's J. S. Todd 1, 160 ft, oih from pay 1680 ft, dr 1950 ft. Wm. Schaffer et al's University 1, sd 1365 ft. Jim Wade-Cromwell et al's Powell 1, dr 1760 ft.

CULBERSON COUNTY — The California Co.'s M. A. Grisham 1-A, dr 3725 ft. Pure Oil Co.'s Mrs. G. H. Quaid 1, sd 1900 ft. Grisham et al's Grisham 1, sd 3370 ft.

JEFF DAVIS COUNTY—Herbert Oil Co.'s T. M. Wingo 1, co cavings, td 1782 ft.

GARZA COUNTY—Deep Rock Oil Co.'s S. M. Swenson 1, spudding. Choate-Henshaw & Marland's Connell 1, sd for fuel 3300 ft. Emerald Oil Co.'s Connell 1, dr 1615 ft. Mid-West Exploration Co.'s N. N. Rogers 1, lcn.

GLASSCOCK COUNTY — Choate-Henshaw & Marland's Neal-Monk 1, hfw 1700-20 ft, dr 1803 ft. J. A. Mascho & Marland's Nellis Calder 1, rig. Case & Hoover's W. H. Sparkman 1, co 1945 ft.

TOM GREEN COUNTY—M. D. Bryant et al's Llano County Fee 1, spd and sd. Penn-Windsor et al's Harley Turner 1, trace oil 935-40 ft, sd in water sand 980 ft. Church-Fields

et al's Williams 1, ur 12½-inch cas 810 ft. Roxana Pet. Corp.'s L. T. Clark 1, dr 1265 ft.

HOWARD COUNTY—Deep Rock Oil Co.'s Hyman-Scott 1, rebldg burned dk, td 3005 ft. Fred Hyer et al's H. R. Clay 1, sd for storage 1565 ft. Choate-Henshaw & Marland's O'Daniel 1, co at 2825 ft, with 1500 ft fluid in hole, td 3103 ft. Owens-Sloan et al's Scott 1, machine. Transcontinental Oil Co.'s John Roberts 1, lcn.

IRION COUNTY—Oklavania Oil Co.'s Sawyer Cattle Co. 1, dr 650 ft. Orient Oil Co.'s J. D. Sugg 2, spd and sd. P. H. Williams et al's Ashe Bros. 1, lcn.

JONES COUNTY— Red Bank Oil Co.'s Alexander 1, sd 2340 ft. J. C. Yancy et al's Herndon 1, spd and sd; Rowell 1, spd and sd.

KENT COUNTY—The Texas Co.'s Barron 1, spudding.

KING COUNTY—The California Co.'s R. B. Masterson 1, sd 3100 ft. Hoffer Oil Corp.'s Patten 1, sd 1580 ft.

LOVING COUNTY—P. V. Petroleum Co.'s J. J. Wheat 1, sd 4273 ft. Lockhart & Co.'s W. D. Johnson 1, sd 3150 ft.

LYNN COUNTY—Hart Oil Corp.'s C. O. Edwards 1, dr 150 ft.

MIDLAND COUNTY—M. Agress et al's Jones 1, sd 755 ft. Rook-Zimmerman et al's Hill 1, preparing to resume, td 3650 ft.

MITCHELL COUNTY—Atlantic Oil Prod. Co.'s Ricker-Adams 2, swabbing 150 barrels, 3075 ft; Ricker-Adams 3, dr 330 ft; Ricker-Adams 4, rig. The California Co.'s Adams 1-B, trace of oil 2410 ft, dr 2520 ft; Paul Elder 5, rig; Morrison 15, water trouble 1330 ft; H. C. Miller 5-A, rig; Swenson 1, dr 2670 ft; Womack 3, dr 500 ft. Eastland Oil Co. and Gulf's Adams 1, dr 360 ft. W. B. Green et al's Ellwood 1, sd 3306 ft. Mid-Kansas O. & G. Co.'s Ellwood 1, crooked hole 380 ft. Marland Oil Co.'s Shumaker 1, spd and sd. Morrison-Thompson's Scott-Hyman 1, sd 1440 ft. Magnolia Pet. Co.'s W. W. Watson 1, has 2000 ft oih, dr 2905 ft; Lucey Coleman 1, trace oil 2495 ft, dr 2615 ft; F. Adams 1, rig; C. M. Adams 3, rig; Kloh-Abrams 1, lcn.

PECOS COUNTY—Tom Adams Oil Co.'s A. A. Gray 1, sd 945 ft. Dixie Oil Co.'s Mrs. L. Hersheusen 1, sd for water 1475 ft. Transcontinental Oil Co.'s Perry 1, ur cas 1825 ft. T. J. Quinby et al's Perry 1, ur cas 1825 ft. ft. West Texas Exploration Co.'s Macey 1, dr 1195 ft.

PRESIDIO COUNTY—Hadlock & Miller's Tootle 1, sd for cas 1780 ft.

REAGAN COUNTY—Big Lake Oil Co.'s University 20-A, water trouble 2455 ft; University 23-A, dr bridge 2461 ft; University 25-A, water trouble 2480 ft; University 37-A, rig; University 51, fsh 2485 ft; University 52, fsh 2510 ft; University 53, dr 2745 ft; University 54, flowing 2600 bbls, rebldg burned dk, td 3070 ft; University 55, dr 2705 ft; University 56, rig; University 57, dr 1085 ft; University 58, dr 950 ft; University 59, dr 975 ft; University 60, dr 345 ft; University 61, dr 300 ft; University 62, rig. H. D. Camp et al's University 1, sd 280 ft. Milham Corp.'s University 1, dr 650 ft. Ben Simon et al's R. A. Walters 1, lcn. L. V. Tannehill et al's University 1, sd 1160 ft. Peer Oil Corp.'s Sawyer Cattle Co. 1, dr 450 ft. Texon Oil & Land Co.'s University 31, dr 3010 ft; University 33, fsh tools 2480 ft; University 37, dr 2180 ft; University 38, rig; University 1-A, (deep test) fsh tools 1875 ft. University Oil Co.'s University 1, sd 3205 ft.

REEVES COUNTY—Deep Rock Oil Co.'s M. W. Tatum 1, dr 1800 ft. World Oil Co.'s Abrams 1, dr 1015 ft. Schooler-Slack et al's Abrams 1, sd for cas 320 ft.

SCURRY COUNTY—Fogelson et al's Bryce 1. spd and sd. Lockhart & Co.'s S. H. Newman 1, dr 250 ft. Morrison-Thompson et al's M. E. Towle 1, rig.

STONEWALL COUNTY — Arkansas Fuel Oil Co.'s Craft 1, dr lime 3091 ft. Elder Nance et al's Ward 1, sd 2130 ft; Thomas 1, sd 1520 ft. Ward Synd.'s J. Q. Ward 1, dr 1960 ft.

STERLING COUNTY — Co-Operative Dev. Co.'s E. W. Douthitt 1-A, dr 1020 ft. Chicago-Texas O. & G. Co.'s Durham 1, dr 2360 ft. Chas. Harty et al's Reynolds-Harty 1, set 10-inch cas 1205 ft. Deep Rock Oil Co.'s Clark 1, spudding. H. D. Rummel & Kanawah-Angelo Oil Co.'s L. T. Clark 1, sd 1430 ft. Wrightsman et al's Collins 1, dr 320 ft. White Eagle O. & R. Co.'s H. M. Mills 1-A, sd 3259 ft.

SUTTON COUNTY—Chesapeake Oil Co.'s Clarkson-Ellison 1, dr 265 ft.

TAYLOR COUNTY—Sanger O. & R. Co.'s R. H. Anderson 1, sd 1860 ft; W. Norwood 1, spd and sd.

UPTON COUNTY—Big Mesa Oil Co.'s University 1, dr 2485 ft. Choate-Henshaw & Marland's Noelke-Murphy 1, lcn. Dixie Oil Co.'s A. S. Burleson 1, dk; C. W. Hobbs 1, (core test) machine. W. W. Donnelly & E. L. Hults' H. M. Halff 1, rig. J. A. Germany et al's H. M. Halff 1, set 12½-inch cas 685 ft. Independent O. & G. Co.'s A. S. Burleson 1, top salt 575 ft, dr 590 ft. Kirby Pet. Co.'s Union Land Co. 1, dr 2510 ft. Plateau Oil Co.'s Union Land Co. 1, top salt 555 ft, dr 685 ft. Republic Prod. Co. & Marland's Mrs. Baker 1, flowed 50 barrels Saturday, pumping, td 2271 ft. The Texas Co.'s Union Land Co. 1, sd for 12½-inch cas 115 ft. F. P. Zoch et al's Union Land Co. 1, spudding; E. P. Ruhman-Windham 1, rig.

VAL VERDE COUNTY—A. Blume et al's Moore Estate 1, dr 1865 ft. Plateau Oil Co.'s B. S. Harrison 1, lcn.

WARD COUNTY — Chesapeake Oil Co.'s Edgar J. Marston 1, rig. Gulf Prod. Co.'s Hutchings et al 1, top lime 2105 ft, dr anhydrite and lime 2905 ft.

WINKLER COUNTY—R. A. Westbrook et al's T. C. Hendrick 1, rig.

Coastal Wildcats

COMPLETIONS

Company, Well and Location	Initial Producers Bbls.	Depth
Brazoria County—		
Rycade Oil Corp.'s Wisdom 5.....	*	1717
Calcasieu Parish—		
Standard Oil Co. of La. Industrial Lbr. Co. 4	*	1306
Hardin County—		
Vacuum Oil Co.'s R. Teel 2	*	3600

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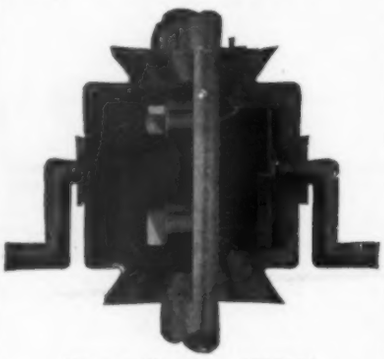

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DRILLING REPORT

BRAZORIA COUNTY—Rycade Oil Corp.'s Wisdom 5, at Nash Dome, 500 ft NE of No. 3, dr 1717 ft cap rock.

CHAMBERS COUNTY—W. C. Moore et al's Blanke 2, on Blanke tract, H&TC, sec 39, 1500 ft W of Blanke 1, dr 840 ft, gumbo. C. T. Rucker's Fisher 1, 6 miles SE of Goose Creek, at Houston Point, sd; Rucker 2, 600 ft NE of Fisher 1, on A. B. Lawrence tract, sd.

COLORADO COUNTY—R. C. Timms et al's Drumgould 1, H. A. Cutler lease near Eagle Lake, dr 1500 ft.

FORT BEND COUNTY—Gulf Prod. Co.'s Moore 5, John Moore lease, near Long Point dome, L. Burknap sur, 1000 ft SE of Moore 4, sd 3678 ft. Rycade Oil Corp.'s Wisdom 4, 200 ft S of No. 2, off Nash dome, fishing 1353 ft. Flessner 2, 150 ft N and 1300 ft E of SW cor of Dredrich Flessner 200-acre tract, moving in dk timbers; J. Meier 3, off Nash dome, lcn. P. A. Nellan Inc.'s Frederick 2, 300 ft to N and E lines, sur 19, S. George lease, no report.

GALVESTON COUNTY—Gulf Prod. Co.'s George E. Smith 3, at High Island, 300 ft E of Smith 2, bldg standard rig; George E. Smith 4, 300 ft W of Smith 2 on Dunman sur, wtg for cement to set, 3200 ft.

HARDIN COUNTY—Vacuum Oil Co.'s Teel 2, near Saratoga, 100 ft S and 80 degrees W of R. Teel 1, on Teel lease, abn 3600 ft; R. Teel 3, near Saratoga, lcn.

HARRIS COUNTY—The Texas Co.'s Warren 6, near Hockley, 1300 ft to W and 800 ft to S of E line. E. Ehrenberg sur, dr 1930 ft, blue shale and lime; Mackmiller 4, 200 ft N and W of SE cor of James Erwin sur, dr 3958 ft, shale and lime. Rio Bravo Oil Co.'s Settegast 2, 650 ft W and 500 ft S of NE cor of Settegast 100-acre lease, dr 3525 ft, gumbo.

JEFFERSON COUNTY—Houston Oil Co.'s Sun Davis 4, at Big Hill, 400 ft N of No. 3, T&NO Ry sur, dr 3102 ft, sandy shale; Pipkin Davis 1, near Big Hill, 250 ft N and E of SW cor of Pipkin Davis 32-acre tract, sd. Sun Dyson 1, near Big Hill, dr 2787 ft, lime rock. Gulf Prod. Co.'s Thomas 5, at Fannette, near Hampshire on E. Thomas 445-acre tract, dr 1212 ft in gumbo; Thomas 6, lcn. Yount Lee Co.'s McFadden 3, on McFadden-Weiss-Kyle tract, 300 ft S of No. 2, dr 650 ft sand.

MATAGORDA COUNTY—Sheppard Mound Oil Co.'s Hawkins 2, at Sheppard Mound, on Hawkins Ranch, cored 2904 ft, rock.

ORANGE COUNTY—Sinclair Oil & Gas Co.'s Turner 1, 1211 ft S of NE cor J. W. Turner 30-acre tract, dr 5498 ft shale. Republic Prod. Co.'s David French 1, M. Palmer tract, 1628 ft W and 105 ft to S line, dr 2136 ft, shale.

REFUGIO COUNTY — Houston Oil Co.'s O'Connor 1, Tom O'Connor lease, Hearn sur, near Mission Bay, set cas 463 ft.

VICTORIA COUNTY — Houston Oil Co.'s O'Connor 1, O'Connor lease, Hearn sur, near 1499 ft, gumbo.

WASHINGTON COUNTY—S. H. Spangler et al's Regeine 1, 6 miles NW of Burton and 3¼ miles N of Carmine, Sandtown district, on Regeine farm, dr 865 ft gumbo.

WHARTON COUNTY — Jas. W. Rich & Humphrey Oil Corp.'s Dennis 1, 5 miles NW of Wharton on blk 9, R. Kuykendall league, 800 ft E of lot 10, 2324 ft W of E line of blk 8, 4175 ft S of Colorado River, dr 435 ft, gumbo. Atlantic Oil Producing Co.'s Taylor 1, 300 ft NW of Texas Co.'s Taylor 3 and 50 ft from SW and SE lines of Atlantic 20-acre tract, SW side of Bolling dome, dr 2100 ft gumbo; Taylor 3, 50 ft from both lines of SW cor of Atlantic 20-acre lease, moving in dk timbers. Humble O. & R. Co.'s Hawes 1, 50 ft from both lines of NE cor of E. Hawes 74-acre tract, lcn. The Texas Co.'s Taylor 4, 200 ft NW of Taylor 3 on S. T. Taylor 400-acre tract, rig up; M. S. Floyd 1, on M. S. Floyd 56-acre tract, lcn.

LOUISIANA GULF COAST—Vacuum Oil Co.'s Farquhar 2, 150 ft S and 100 ft E of NW cor of SW¼ of SW¼ of sec 9, fsh 3692 ft; Miller 5, 300 ft N of SW cor of NW¼ of sec 10, fsh 4416 ft; Freiberg & Wolfe 1, 780 ft S and 685 ft E of NE cor of SW¼ of Sec. 9, wtg on cutting tools; 2, 200 ft each way from NE cor, lcn; Miller 6, 475 ft N and 11 ft W of center of sec 9, twp 9s, range 10w, dr 1200 ft gumbo; Bordages 2, 500 ft W and 200 ft N of SE cor of N½ of NW¼ of sec 9, rigging up. Marland Oil Co.'s Phoenix Dev. Co. 1, at Lockport, 650 ft E and 150 ft S of NW cor of SW sec 16, mudding 5664 ft. Ohio Oil Co.'s Martin 1, in Martin Parish, Hager dome district, NE¼ sec 32, 1000 ft S and 10 ft W of NE cor, dr 1240 ft, gumbo. Standard Oil Co.'s Industrial Lumber Co. 1, Calcasieu Parish, 2917 ft E and 200 ft S of NW cor sec 30, Twp. 9, Range 12, abn 1306 ft cap rock; Industrial Lumber Co. 5, 1000 ft S of No. 4, lcn. Union Sulphur Co.'s Doiron 1, Calcasieu Parish, 340 ft S and 870 ft W of NE cor of NE¼ sec 4-8-10, lcn. George Leland's Caffrey 1, St. Mary Parish, 330 ft N and 220 ft E of SW cor lot 101 on Cote Blanche Island, sec 12-15-7, fsh 1640 ft. Earl Pool et al's Castle 1, Calcasieu Parish, NE¼ of sec 14-9-3, sd 2070 ft. Bristol Oil & Mineral Co.'s Desire Dreaux 1, St. Landry Parish, 1147 ft W and 1352 ft N of SE cor sec 15-8s-3e, sd 2222 ft. Yount-Lee Oil Co.'s Stateland 1 Cameron Parish, Hackberry dome, 100 ft N and 1197 ft E of SW cor of sec 16-12s-10w, dr 3850 ft, gumbo. Pure Oil Co.'s Sweetlake 2, Cameron Parish, dr 4717 ft sandy shale; Sallier 2, Calcasieu Parish, sd 4486 ft. Vacuum Oil Co.'s Miller 7, near Lockport, Calcasieu Parish, 500 ft W of No. 3, lcn; Miller 8, near Lockport, Calcasieu Parish, 400 ft N of No. 3, lcn; Miller 9, near Lockport, Calcasieu Parish, 400 ft N and 100 ft E of No. 4, lcn.

Texas Panhandle Wildcats

COMPLETION

Company, Well, Location—	Initial Production Bbls.	Depth
Hutchinson County—		
Douglas Oil Co. G. A. Whittenburg 1	50	3065

DRILLING REPORT

CARSON COUNTY—Amarillo Oil Co.'s L. Bivins 3-B, dr 2430 ft. American Ref. Co.'s Burnett 5-A, dr 2855 ft; Burnett 6, set 10-inch cas 2030 ft. J. S. Cosden et al's Burnett 1, dr 905 ft. B. S. Barnes et al's Burnett 1, dr 200 ft. Crosbie et al's Burnett 3, dk. Culbertson Bros. & Co.'s Burnett 1, sd making gas 2460 ft. Gates Oil Co.'s Burnett 2, cased off junk, dr 2805 ft. Gulf Prod. Co.'s Burnett 10, spudding. Marland Oil Co.'s Burnett 1-A, rig; Burnett 1-B, lcn. The Texas Co.'s Mary C. Burnett 1, cem cas 1897 ft.

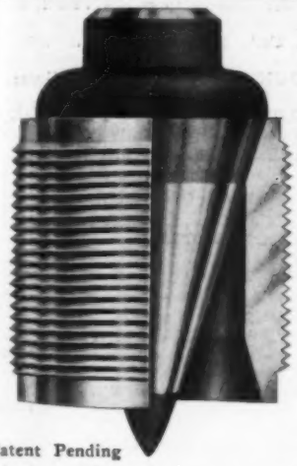
COLLINGSWORTH COUNTY—Continental Oil Co.'s Hughes 1, ur 8¼-inch cas 2775 ft.

COTTLE COUNTY—National Potash Co.'s A. C. Dulaney 1, dr 1415 ft.

GRAY COUNTY—Anderson-Brock et al's Beavers 1, dr granite 3670 ft. Empire Gas & Fuel Co.'s H. Heithott 1, fsh tools in cave 2920 ft. H. F. Wilcox et al's Worley-Reynolds 2, dr 765 ft. Young & Patrick's Allie Byrum 1, showing oil in lime 3160-90 ft, dr shale 3200 ft. The Texas Co.'s G. H. Saunders 2, lcn is 350 ft SW corner of east 113 acres, sec 3, H&GN survey, block 1.

HALL COUNTY—Hudspeth & Taylor's T. R. Fuston 1, dr 1645 ft.

HUTCHINSON COUNTY — American Ref. Co.'s Weatherly 1, plugged back from 3325 ft to 3080 ft for shot. Canyon Oil Co.'s Whittenburg 1, swedging cas 2300 ft; Whittenburg 2, set 12½-inch cas 650 ft. Centerfield Oil Co.'s Smith 1, dr 2890 ft. Jack Crosbie et al's J. A. Whittenburg 1, spudding. Currie Bros. & Phillips et al's Smith 1, ur 12½-inch cas 600 ft. Dixon Creek Oil Co.'s Smith 2-A, flowing 100 barrels trying re-set 8¼-inch cas 2865 ft. Drysdale Oil Corp.'s Weatherly 1, dr 1665 ft. Gates Oil Co.'s Kingsland 1, lcn. Gibson Oil Corp.'s G. A. Whittenburg 2, lcn; J. A. Whittenburg 1, dr 375 ft; Kingsland 1, rig. Gulf Prod. Co.'s E. Cockrell 1, dr 590 ft; J. A. Whittenburg 1, dr 500 ft. W. H. Holmes et al's Smith 1, spudding. Lenox & Stover et al's Smith 1, dr 530 ft. McKinney-Bayer Oil Corp.'s Weatherly 1, dr 2345 ft. McIlroy Oil Co.'s Smith 2, dr 2390 ft. McIlroy & Herring et al's Smith 1, dr 1630 ft. McMillen et al's J. A. Whittenburg 1, spudding. Miller & Wetzel's J. A. Whittenburg 1, rig. J. H. Middleton et al's Weatherly 2, making gas, dr 2845 ft. Native Oil Co.'s Johnson Bros. 1, set 10-inch cas 2180 ft. J. R. Phillips et al's Weatherly 1, swedging 10-inch cas 2190 ft. Phillips Pet. Co.'s J. A. Whittenburg 1, rig; Whittenburg 2, lcn. Phillips Pet. Co. et al's Johnson Bros. 1, rig. Prairie O. & G. Co.'s M. Weatherly 1, ur 12½ inch cas 900 ft. Prairie & T.P. Coal & Oil



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Patent Pending

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by actual tests, under the most severe corrosive and magnetic pumping conditions, that our SECO and ALLOYED Valves are the best Valves ever offered to the oil trade. These Valves are non-magnetic and non-corrosive. They will not stick. Therefore they insure quick valve action. The SECO is made of tough non-corrosive, non-magnetic steel, and is acid-resisting, while the ALLOYED is made of alloy metal and is non-corrosive and acid resisting. The SECO can be had in Screw Seat, with Plumb Bob or Ball, while the ALLOYED is made in Plumb Bob only, but can be used with the SECO Seat.

We also manufacture other Seats, Plumb Bobs and Balls of a good grade tool steel, either hard or soft. Well conditions determine which one should be used. These Valves can be used in any well, and they will increase production if the fluid is there. All our Valves have from 43 to 65 percent greater fluid capacity than the standard size Valves. Our Screw Seats are also Reversible, as shown in illustration. A feature worthy of your consideration is the fact that they can not become loose or leak around outside of seat. Try them and

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General Offices

BARTLESVILLE, OKLAHOMA

Absorption Gasoline

GRADE A DOUBLE A
GRADE B DOUBLE B
GRADE C

Plants Located Throughout Oklahoma, Louisiana and Texas

Co.'s Johnson Bros. 1, dr 650 ft. Pulaski Oil Co.'s Smith 1, dr 480 ft; Smith 2, dr 330 ft; Smith 3, rig. W. R. Ramsey et al's Johnson Bros. 1, rig. Skelley Oil Co.'s J. A. Whittenburg 1, rig. South Hutchinson Oil Co.'s Whittenburg 2, dr 2220 ft; Whittenburg 3, rig. The Texas Co.'s E. Cooper 1, rig; S. B. Burnett 1, lcn is 400 ft from NE corner of SW¼ Sec. 132, I&GN survey, block 5. Travelers Oil Co.'s Kingsland 1, dr 2815 ft. Tex-O Oil Co.'s Johnson Bros. 1, dr by bit 2740 ft. Twin-Six Oil Co.'s Kingsland 2, dr by tools 2435 ft; Kingsland 3, rig; Kingsland 4, dr 450 ft. J. D. Ward et al's Cockrell 1 and 2, rigs. Western Enterprise O. & G. Co.'s Smith 2, fsh cas 2075 ft. Westex Oil Co.'s Whittenburg 1, dr 2130 ft; J. A. Whittenburg 2, spudding. Jim Whittington et al's Kingsland 1, dr 2125 ft. White Eagle O. & R. Co.'s Smith 1, lcn.

MOORE COUNTY—Amarillo Oil Co.'s R. B. Masterson 2-A, fsh tools 1850 ft.

POTTER COUNTY—Amarillo Oil Co.'s L. Bivine 4-A, dr 2735 ft. Prairie O. & G. Co.'s Lee Bivins 1, crooked hole 2645 ft.

ROBERTS COUNTY—Phil Engle et al's Mrs. Lederick 1, ur cas 3950 ft.

SWISHER COUNTY—Overson & Keagans et al's L. M. Woodward 1, machine, lcn is at center NE¼ of SW¼ Sec. 4, block M-13.

WHEELER COUNTY—McFarland-Thomas et al's Kachelhoffer 1, dr 1775 ft. Mid-West Exploration Co.'s W. C. Company 1, water trouble 2985 ft.

San Antonio District Wildcats

BEXAR COUNTY—Ballard & Underwood's No. 1 Easterwood, dr.

CALDWELL COUNTY—C. R. Houston's Crenshaw 4, dr. United North & South Oil Co.'s Kelly 1, dr below 5500 ft; Tiller 1, dr below 5500 ft; Brown 1, dk; Tabor 1, dr; A. Merci dr; Rios, dr; Allen, dr. E. L. Smith Oil Co.'s Davis 1, dk. Gulf Production Co.'s Kennedy 1, dk.

DUVAL COUNTY—Associated Oil Co.'s Sutherland 1, dr. Humble Oil Refining Co.'s Hagist 1, dr. United States Gas & Oil Co.'s Peters 1, set cas; Duval 1, spudded in.

GUADALUPE COUNTY—Dunning & Armstrong's Jarvis Dale 1, dk. Magnolia Pet. Co.'s Day 1, dr below 3300 ft. Howell et al's Louis Willmann, dr. Smith-Payne-Bond's Duran 1, dk.

JIM HOGG COUNTY—Rydal-Rycade Oil Co.'s Allen 1, dr. Beaucamp et al's Vela 1, dr. Magnolia Pet. Co.'s M. S. Bank 3, set cas. Andrews Pet. Co.'s M. S. Bank 1, dr below 2230 ft.

STARR COUNTY—O. W. Killam's Guerra 1, dr below 400 ft.

ZAPATA COUNTY—Texas Co.'s Jennings 2, set cas 1330 ft.

Arkansas Wildcats

COMPLETIONS

Company, Well, Location—	Initial Production Bbls.	Depth
Columbia County—		
Natural Gas & Fuel Corp.'s Haynes 1, 20-19-18	*	3263
La Fayette County—		
Humble Oil & Ref. Co.'s Knighton 1, 3-16-23	*	1480
Miller County—		
Humble Oil & Ref. Co.'s Eagle Chute 1, 23-17-28	*	1497

DRILLING REPORT

ASHLEY COUNTY—Pine Prairie Oil Co.'s Pine Prairie 2, 1-17-6, dk. Rhodes et al's Bledsoe 1, 20-15-7, dr 1625 ft.

CALHOUN COUNTY — Brown-Murdock Synd.'s Freeman-Smith 1, 25-15-18, sd 2907 ft. Magnolia Pet. Co.'s Calion Lumber Co. 1, 29-15-14, coring 3480 ft. Southern Crude Oil Purchasing Co.'s Freeman-Smith 1, 19-14-15, rig.

CLARK COUNTY—Heath Trust's Arnold 1, 12-9-20, to deepen 838 ft. Wheelen Oil Co.'s Brown 1, 35-10-20, set 8-inch 798 ft.

CLEVELAND COUNTY—Dedman et al's Moore 1, 28-9-10, sd 1757. Simms Oil Co.'s Moseley 1, 19-10-11, dr 3200 ft.

COLUMBIA COUNTY— Chaddick et al's Emerson 1, 8-19-19, tested dry 2779 ft, dr 2860 ft. Pluto Oil Co.'s Robinson 2, 23-18-23, set 8-inch 900 ft.

DALLAS COUNTY—McNiel et al's Owens 1, 29-10-16, dr 2100 ft.

DREW COUNTY—Graves et al's Karnes 1, 35-13-6, sd 3033 ft. McClintock et al's Ogle 1, 35-13-5, sd 1810 ft.

HEMPSTEAD COUNTY — Burton et al's Garland 1, 23-10-25, dr 8¼-inch plug 1000 ft. C. W. Robinson's Toner 1, 29-12-23, set 12½-inch 80 ft. Tarver et al's Swafford 1, 14-11-25, dr 2740 ft.

LA FAYETTE COUNTY—Arkansas Fuel Oil Co.'s Allen 2, 19-19-24, sd 2701 ft, repairing rig; Red River Lands 1, 18-19-24, setting 6-inch 2749 ft. Ken-Saw Pet. Co.'s Red River Valley 2, 3-20-24, fsh 2820 ft. White et al's Roper 1, 27-16-23, dr 925 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 2-13-29, sw 2952 ft.

MILLER COUNTY—Buzzard Bluff Oil Co.'s Gillespie 1, 22-14-26, sd 655 ft. Copeland et al's Wiseman 1, 36-15-27, sd 2547 ft. Humble O. & R. Co.'s McKnight 1, 17-17-26, lcn.

NEVADA COUNTY—Magnolia Pet. Co.'s Johnson 1, 3-15-21, dr 4200 ft. Smitherman & McDonald's Ellis 1, 2-14-21, rig.

OUACHITA COUNTY—Gossett et al's Davis 1, 26-15-19, dk pattern; Thompson 1, 22-15-19, dk. Pure Oil Co.'s Stoute Lbr. 1, 27-15-18, dr 2665 ft. Van Diver et al's Yarbrough 1, 22-14-17, dr 1525 ft.

UNION COUNTY—E. M. Jones' Dumas 1, 8-17-16, sd 2520 ft. Kampeter et al's Townes 1, 34-19-11, set 12½-inch 203 ft. Liberty Oil Co.'s Davis 1, 31-16-14, coring 2165 ft. Owen et al's Porter 1, 4-17-16, coring 2040 ft. Ravenger et al's Dumas 1, 9-17-16, dr 1940 ft. J. D. Reynolds et al's Dumas 1, 15-17-16, coring 2139 ft.

Kansas Wildcats

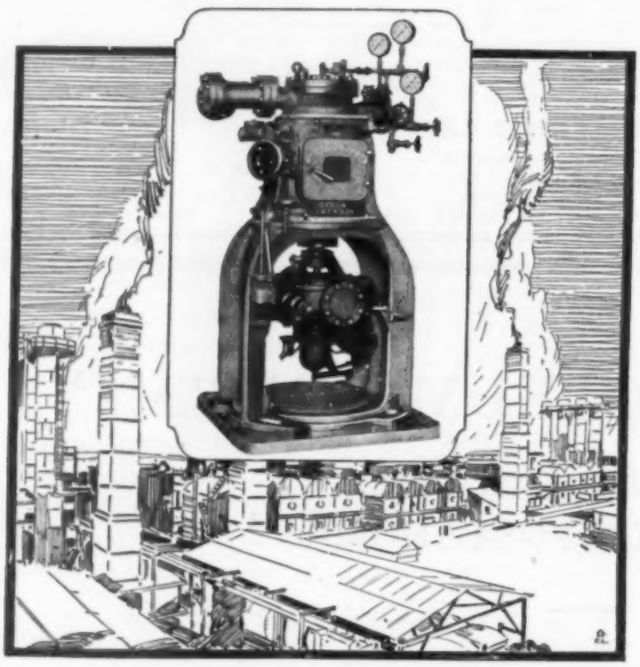
BARBER COUNTY—R. B. Martin's Martin 1, NWc 14-34-11, dr 1500 ft.

BUTLER COUNTY—Skelly Oil Co.'s Dohren 1, NE 14-25-3, dr 2280 ft. Polhamus & Smith's Fuller 1, SEc 9-26-6, sd 770 ft.

BARTON COUNTY— Dick Grady's Taul 1, NWc 31-18-12, sd 2100 ft. John Herron, Everleigh 1, SEc NE 22-18-3w, dr 4550 ft. Huffine et al's Smith 1, C NE SE NE 17-19-11, sd 3900 ft.

CHASE COUNTY—Dingee, Pryor & Lock-

Byron Jackson Hot Oil Pumps



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Reduces pulling expense
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Prevents sand trouble
Separates the oil from the gas at the bottom of the hole

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Say you saw it in The OIL WEEKLY

hart et al's Evans 1, NWc NE 1-22-9, sd 1300 ft; Ateyc 1, NWc SE 25-21-9, sd 1150 ft.

COWLEY COUNTY—S. H. E. Pet. Co.'s Day 1, NE NW 24-34-6, dr 1275 ft.

CLOUD COUNTY—Concordie Oil & Prod. Co.'s Mudock 1, SEc 6-6-4w, sd 3030 ft.

CHAUTAUQUA COUNTY—Blackwell O. & G. Co.'s McKown 1, NWc SE 31-32-10, sd 2290 ft.

ELK COUNTY—I. T. I. O. Co.'s Cummings 1, C NW NW 31-30-10, sd 1530 ft.

GREENWOOD COUNTY—T. K. Simmons' Frankhauser 1, NE SW 4-22-12, sd 645 ft.

GERRY COUNTY — Liberty-Texas' Wright 1, NEc 9-12-6, sd 1100 ft; Foster 1, NEc 30-13-6, sd 2000 ft.

GRAHAM COUNTY—Keyes Bros.' Taxton 1, SEc NW 23-8-24, run 8-inch 2420 ft. Gruin & Shilers' Baker 1, NWc SE NW 17-10-24, rig.

JEFFERSON COUNTY — Northern Counties' Edwards 1, SEc NW NW 13-9-9, sd 3405 ft.

LABETTE COUNTY—Ark. Fuel Oil Co.'s Sparks 1, NEc SE SW 14-31-7, sd 1110 ft.

LINCOLN COUNTY — Scott & Collins' Stone 1, SE SW NE 19-11-6, sd 500 ft.

OSAGE COUNTY—Rogers & Biddle's Bertha 1, SEc NW SE 28-17-15, len. Mul-Vit Dev. Co.'s Neil 1, NWc NE SW NW 8-17-17, sd 2835 ft. Baker et al's Lease 1, C SE SE 3-15-15, sd 260 ft.

RENO COUNTY—Frank Hopper's Stevens 1, NWc 7-26-7, sd 2750 ft.

RICE COUNTY—Stamey's Barnes 1, SEc NE 21-20-6, sd 2726 ft. Jasper & Berchka's Walker 1, SWc NE 10-18-6, ur 5-inch 3460 ft.

RILEY COUNTY—Pawnee O. & G. Co.'s Marks 1, SWc NE NW 26-10-6, dr 2400 ft.

ROOKS COUNTY—Keys Pet. Co.'s Saidon 1, NWc SW SE 7-8-20, spd and sd. C. Findeiss et al's Minx 1, SWc 25-10-19, td 3669 ft.

SALINE COUNTY—Thrall et al's Halquest 1, SEc NE NW 15-15-4, sd 1010 ft.

SUMNER COUNTY—Roxana Pet. Corp.'s Miller 1, NE SW 17-32-2e, dr 2425 ft. John Herron et al's Baker 1, NE SW 13-25-2w, cellar.

TREGO COUNTY—Keys Pet. Co.'s Welsch 1, NWc SE 5-11-25, sd 1450 ft; Welsch 2, SWc NE SW 5-11-25, sd 1550 ft.

WABAUNSEE COUNTY—Williams et al's Henderson 1, NEc SW NE 15-13-12, sd 3600 ft.

WOODSON COUNTY—Alter et al's Hunt 1, NWc SW 13-25-14, sd 700 ft.

Oklahoma Wildcats

ATOKA COUNTY—Hanson et al's Dabney 1, C SE NE 17-4-11, sd 3722 ft. Wapanucka Dev. Co., Unde wood 1, C W L SE SE 28-1s-10, sd 1343 ft.

BECKHAM COUNTY—Magnolia Pet. Co.'s Roberts 1, C NE NE 4-8-25, dr 3630 ft. W. R. Duke's McGee 1, NWc SW SE 25-8-22, sd 950 ft.

BLAINE COUNTY—Okama Oil Co.'s Ekel...s 1, SWc 21-15-10, sd 3010 ft.

CANADIAN COUNTY — Thos. Revelle's Dawson 1, NEc SE NW 34-13-9, sd 3065 ft. Carrol et al's Setter 1, SEc 2-13-8w, sd 1000 ft. O. D. Jones et al's Sanders 1, C NE NE NE 29-11-7w, sd 2150 ft.

CLEVELAND COUNTY — Garr Oil Co.'s Holland 1, NEc SE 31-1-4, sd 2620 ft.

GRANT COUNTY — Cowden's Vallner 2, SW 22-25-4w, sd 1475 ft. Lambert & Mink's Taber 1, C SE NE SE 23-26-3w, spd and sd

HUGHES COUNTY — Walton, Snyder & Marshall's Kite 1, C E L NE NW 8-6-10, sd 370 ft. Pamenter et al's Stewart 1, C SW SE 11-5-8, rig. Henry Greis & Kerrs' Pearson 1, C SE NE NE 30-5-10, td 3500 ft. Brock's Bruner 1, C SW SW NW 28-7-8, td 4176, small flows.

JEFFERSON COUNTY — Barkers et al's Major 1, C SE SW 34-5-6, spd and sd. Godley Oil Co.'s Woodworth 1, C NE NW 36-5-4w, dr 2925 ft.

KAY COUNTY—Galconda Oil Co.'s Welge 1, SWc NW 29-27-2, ur 8-inch 2445 ft. Parkhurst & Graham's Eaton 1, C SE SE SW 3-28-3, spd and sd. Davis Drlg. Co.'s Street 1, C NE NE NE 31-28-3, sd 3100 ft hfw. Simms Oil Co.'s School land 1, C NE NE SW 33-28-1w, sd 353 ft. Miss. Valley Oil Co.'s Butler 1, C NE NE NE 22-27-2e, td 3772 ft. Souligny Bros.' School land 1, NEc NW 16-26-3, sd 705 ft.

LINCOLN COUNTY—P. & R. Corp.'s Henzig 1, NWc 7-13-6, td 387 ft. Douglas Oil Co.p.'s Ewing 1, NWc 7-13-3e, sd 3945 ft. Ruby et al's Cull 1, NEc NW 36-15-4, sd 4721 ft for cas.

LOGAN COUNTY— Franklin Oil Assn.'s Moore 1, NWc SE SE 28-18-4w, td 3570 ft. Haley & Pioneers' Quair 1, SWc SE 33-18-3w, dr 1547 ft. Blackford Oil & Gas Co.'s Lair 1, C S L N½ SE 28-16-1w, sd 1675 ft.

LOVE COUNTY—Smyer & Stein's Gray 1, C SE SE 12-9-1, rig.

MAJOR COUNTY—Texas Prod. Oil Co.'s Cheyene Basin 1, SWc 6-22-14w, sd 200 ft. Frantz & Slick's Gray 1, C NW 36-21-11, sd 1000 ft.

MARSHALL COUNTY—United "8" 's Marshall 1, SW SW 30-5s-6e, sd 510 ft. Ramsey bros.' Griffin 1, SW SW 10-5s-5e, sd 560 ft.

PONTOTOC COUNTY—Bronson & Doyle's Starrett 1, SWc NE 5-4-5, sd 1400 ft.

POTTAWATOMIE COUNTY— Pierce Oil Co.'s Midgett 1, NWc 25-10-4, sd 460 ft. Holmand, Osmond et al's Fiddler 1, SEc NW 4-5-5, sd 545 ft. Central National Oil Co.'s Toney 1, C SW SW SW 28-10-4, sd 755 ft. Texas Co.'s Allenbaugh 1, SEc SW 3-11-5, sd 4560 ft.

SEMINOLE COUNTY — Transcontinental Oil Co.'s Davis 1, NE SW 22-7-7. Bryan Bros.' Walker 1, C SE SE SE 4-7-6, td 2560 ft. Riverside & Kinney's Nitley 1, C S½ NE SE 25-5-5 dr 790 ft. R. F. Garland's Winey 1, C NW NE NW 6-6-8, spd new hole. Superior Oil Co.'s Noble 1-A, NWc NW SE NW 15-9-6, sd 2290 ft. Pure Oil Co.'s Jonah 1, C E L NW NW NE 15-9-7, rigging up.

TILLMAN COUNTY — Oasis Oil Co.'s Snelling 1, SEc SE SE 13-1-18, dr 50 ft. C. & O. Drlg. Co. & Pearson's Daugherty 1, SEc SE 33-4s-15w, dr 3210 ft.

PERMITS GRANTED FOR NEW WELLS

Weekly Comparison of New Wells

Following is a condensed table giving a comparison of permits or locations made for new wells in Kansas, Oklahoma, Arkansas, Louisiana, Texas and California:

Number of Wells for Week Ending

	Sept. 25	Oct. 2	Oct. 9	Oct. 16	Oct. 23	Oct. 30	Nov. 6	Nov. 13	Nov. 20	Nov. 27	Dec. 4	Dec. 11	Dec. 18	Dec. 25	Jan. 1	Jan. 8
Kansas	16	26	35	37	16	22	23	21	37	35	29	35	28	32	40	30
Oklahoma	69	81	67	48	52	76	63	86	60	106	86	73	75	95	76	78
Arkansas	5	..	38	21	9	14	..	18	10	16	10	22	11	15	10	18
Louisiana	15	16	12	13	11	6	9	15	6	15	17	15	15	7	12	15
Texas	167	159	179	133	183	202	156	171	174	126	253	203	210	199	167	111
California	25	29	22	27	23	18	16	23	25	23	23	22	42	40	17	25
Total	297	291	353	279	294	338	*267	334	312	321	418	370	381	388	322	277

*Does not include Arkansas.

ARKANSAS

Calhoun County—Southern Crude Oil Purchasing Co.'s Freeman-Smith 1, 19-14-15, 330 ft N and E of center.

La Fayette County—White et al's Roper 1, 27-16-23.

Miller County— Humble O. & R. Co.'s Eagle Chute Land Co. 1, 23-17-28, 750 ft E and 320 ft N of SW corner of section.

Nevada County—Smitherman & McDonald's Ellis 1, 2-14-21, NEc SW¼ SE¼.

Ouachita County—Mose Gossett's Davis 1, 26-15-19, 330 ft S and E of NWc of sec; Thompson 1, 22-15-19, 165 ft S and 300 ft W of NEc SW¼ SW¼. Humble O. & R. Co.'s F. A. & B. T. Laney 5, 32-15-15, 200 ft N and E of SW cor NW¼ SW¼. Magnolia Pet. Co.'s J. Goodwin 9, 5-16-15, SWc N½ lot 2, NW¼.

Union County— C. H. Allison's Fitzgerald A-1, 17-18-15, 660 ft N and 450 ft E of SWc NE¼ NW¼. J. E. Crosby's Lawton 1, 10-16-15, 200 ft N and E of SWc SE¼ SW¼. Sam Cook's Tatum A-3, 7-16-15, NWc NW¼ NE¼. Estes et al's Murphy 1, 15-16-15, 165 ft S and 330 ft E of NWc SW¼ NW¼. Lion O. & R. Co.'s Murphy G-6, 8-16-15. 660 ft N and E of SWc NE¼ SE¼. Lyall et al's Fee 1, 3-16-15, 150 ft N and W of SEc SE¼ NW¼. Natural Gas & Fuel Corp.'s Flenniken 4, 8-16-15, 690 ft N and 150 ft W of SEc of sec. Owen et al's Parks 1, 32-16-15, SWc NE¼ SE¼. Pure Oil Co.'s Meriweather 8, 6-16-15, SEc NE¼ SW¼. Ravenger et al's Dunas 1, 9-17-16, 200 ft S and E of NWc SE¼ SW¼.

CALIFORNIA

Coalinga Field—Pacific Oil Co.'s No. 64, 25-20-14. Premier Oil Co.'s No. 30, 24-20-14.

Huntington Beach Field—Standard Oil Co.'s Belsa 24, 34-5-11.

Inglewood Field—Associated Oil Co.'s Vickers 28, 7-2-14. Shell Co.'s Rindge 15, 8-2-14.

Long Beach Field—California Pet. Corp.'s Los Cerritos Synd. 1, 13-4-13; Hilton 1, 13-4-13. Joseph B. Dabney's Travers 1, 13-4-13. Herwick Interest's Herwick 25, 13-4-13. J. E. O'Donnell's O'Donnell 51, 13-4-13. B. E. Ger-

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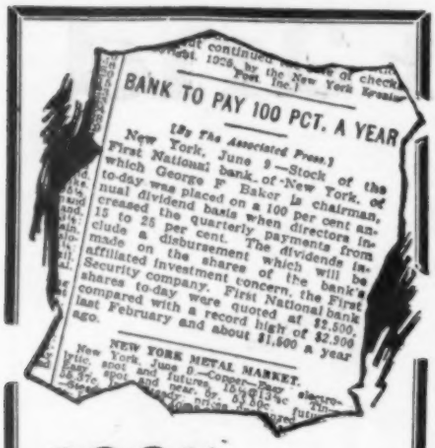
Say you saw it in The OIL WEEKLY


BANK TO PAY 100 PCT. A YEAR
(By the Associated Press.)
New York, June 9.—Stock of the First National bank of New York, of which George F. Baker is chairman, to-day was placed on a 100 per cent annual dividend basis when directors increased the quarterly payments from 15 to 25 per cent. The dividends include a disbursement which will be made on the shares of the bank's affiliated investment concern, the First Security company. First National bank shares to-day were quoted at $2,500, compared with a record high of $2,900 last February and about $1,600 a year ago.
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ner's Bud Gerner 3, 13-4-13. Bess Oil Co.'s No. 1, 13-4-13. Rainbow Pet. Co.'s No. 8, 13-4-13. Craig-Burns & Co., Inc.'s, Delaney 15, 13-4-13. W. I. Lake's No. 1, 13-4-13. George F. Getty, Inc.'s, L. B. 12, 13-4-13; L. B. 13, 13-4-13; L. B. 11, 13-4-13.

Midway Field—Honolulu Cons. Oil Co.'s No. 31, 4-32-24. Berry & Ewing's No. 15, 31-32-24. Midland Oilfields Co., Ltd.'s Thornton B-4, 34-31-24.

Monterey County Field—Harriman Jones Oil Co.'s No. 2, 21-19-6.

San Luis Obispo County Field—Fred. C. McComber's No. 1, 33-12-25.

South Mountain Field—Oak Ridge Oil Co.'s Willard 19, 18-3-20.

Torrance Field—William E. Garner's No. 2, 18-4-13.

LOUISIANA

Bossier Parish—The Palmer Corp.'s W. A. Caplis 9, 25-16N-12W, starting at NW cor of sec 25, run E 648 ft to a point; thence S 23 degrees 30 ft E 1480 ft; thence S 50 degrees W 200 ft to point of location in sec 25. Woodley & Collins' Kilburn et al 1, 18-19N-13W, 2152 ft S and 873 ft E of NW cor of sec.

Caddo Parish—Continental Bank & Trust Co. Tr.'s Hoss heirs 27, 24-22N-15W, 620 ft N and 280 ft E of SW cor NW¼ SW¼. Double H Oil Co.'s Spell 5, 15-21N-15W, 28 ft N and 868 ft W of SE cor of NE¼ of sec. Gulf Ref. Co. of La.'s Ferry Lake 226, 16-20N-16W, 2800 ft N and 1500 ft W of SE cor of sec. The Texas Co.'s Caddo Mineral Lands 46, 23-21N-15W, 660 ft E and 200 ft S of NW cor of sec; Noel B-11, 14-21N-15W, 870 ft N and 200 ft E of SW cor of NW¼ of sec.

Calcasieu Parish—Gulf Ref. Co. of La.'s F. H. Gray 3, 33-10S-12W, apprx 710 ft W and 521 ft S of NE cor of SW¼ of sec. Marrs-McLean F. H. Gray 9, 33-10S-12W, 530 ft S and 620 ft W of center of sec. Standard Oil Co. of La.'s Industrial Lbr. Co. 1, 30-9S-12W, 1200 ft S and 170 ft E of NW cor of NE¼. Vinton Pet. Co.'s Gray-Rescue 17, 4-11S-12W, 212 ft S and 496 ft W of NE cor of sec.

La Salle Parish—Abb Jones' Russell 1, 24-10N-1E, 1520 ft E and 460 ft N of SW cor of sec. H. M. Jones' Russell 1, 25-10N-1E, 150 ft S and 150 ft E of NW cor of NE¼ SE¼.

St. Mary Parish—Rio Bravo Oil Co.'s Glenwild 2, 22-15S-12E, 1230 ft W and 1650 ft S of NW cor of sec.

Webster Parish—Alabama Pet. Co.'s Robbins A-3, 21-21N-10W, 330 ft S and 330 ft E of NW cor of SE¼ SW¼.

KANSAS

Butler County—Magnolia Petroleum Company's Skaer 3, northwest corner of the southwest of the southwest of 25-27-4. The Texas Company's Truesdale 1, southeast corner of the southwest of 22-27-7e; Truesdale 2, northeast corner of the southeast of the southwest of 2-27-7.

Chase County—Derby & Braden Newman 1, northwest corner of the southwest of 24-20-9.

Elk County—Conley et al's Tate 6, center of the east line of the northeast of the southwest of 3-30-9. Elk Petroleum Company's Denton 4, center of the west line of the northwest of the southeast of 3-30-9. Pulaski Oil Company's Donald 1, northeast corner of the northwest of the southwest of 12-30-9. Kansas Central Gas Company's Lawyer 1, center of the east half of the northeast of the southwest of 16-31-9. Anderson Brothers' Longston 4, center of the southwest of the southeast of 16-31-9.

Greenwood County—Tidal Oil & Jones' Pixlee 2, northwest corner of the northeast of the northwest of 3-22-10. Phillips Petroleum Company's Pixlee 1, northwest corner of the northeast of 3-22-10. Kansas Oil Company's Atyec 1, northwest corner of the northeast of 6-22-10. Theta Oil Company Pixlee 8, northeast corner of the southwest of the southeast of 8-22-10. Sinclair Oil & Gas Co.'s Browning 35, southeast corner of the northwest of the northwest of 20-22-10. Simmons et al's Harris 3, center of the east line of the northeast of the northwest of 19-22-11. Phillips Petroleum Company Chandler 1, northeast corner of the northwest of the northeast of 5-22-12. Mission Oil Company's Dales 8-B, southwest corner of the northwest of 25-23-8. Greenland Oil Company Green 20, northeast corner of the northwest of the southeast of 10-23-9. White Eagle et al's Morris 6, southeast corner of the northwest of the southeast of 19-23-9; Morris 7, northeast corner of the southwest of the southeast of 19-23-9. Sullivan et al's Freeman 2, northwest corner of the northeast of the southwest of 6-24-11. Ritchey & Moore Lindaman 1, southwest corner of the southeast of 19-24-11. McGinnis' Willins 1, northeast corner of the southwest of 30-24-11. McGinnis et al's Wiggins 2-B, southwest corner of the northeast of 30-24-11.

Lyons County—Culp et al's Parker 1, northwest corner of the southwest of 5-19-11. Buck et al's Newman 1, southwest corner of 5-20-10. Gosche & Balhere Stratton 1, southeast corner of the northwest of 25-20-12. White Eagle Oil & Ref. Co. Pixlee 2, northwest corner of the southwest of the southeast of 34-21-10. Balliere et al's Carson 1, southwest corner of the northeast 18-21-12.

Russell County—Mid-West Refining Company Oswald 13, southeast corner of the northeast of the northwest of 8-12-15w. Valerius Oil & Gas Company's Oswald 8, southeast corner of the northeast of the southwest of 8-12-15w.

OKLAHOMA

Kay County—Harris & Hahn Swinson 1, center of the southeast of the southeast of the southeast of the northeast of 17-29-1e. Stosnyder et al's Smith 1, northwest corner of the southwest of the northwest of the northwest of 25-29-1e. Arkansas Fuel Oil Company's Kelley 4, southeast corner of 4-27-1w. Blackwell Oil & Gas Company's Geiger 4, northeast corner of the northwest of the northeast of 9-27-1w; Geiger 5, northeast corner of the northeast of the northeast of the northeast of 9-27-1w. Marland Oil Company's North 2-A, twin, center of the northwest of the northwest of the northeast of 12-26-2w. Waite Phillips & Marland Milde 1, northwest corner of the northeast of 32-28-5e.

Grant County—Brazill & Moses Royce 1, southwest corner of the northwest of 34-25-4w.

Noble County—Comar Oil Company's Gaume 8W, old well deepened, southwest corner of the northeast of 2-24-1w; Pettit 11W, old well deepened, southeast corner of the northeast of the northeast of 3-24-1w.

Pawnee County—Magnolia Petroleum Company's Donahue 1-A, twin, southwest corner of 27-23-3e. Adamson Coal & Oil Gas Company Sigan 2, center of the east line west half of the northwest of the southwest of 32-21-8, old well deepened.

Osage County—Phillips Petroleum Company's No. 5, southwest corner of the northwest of the southwest of the southeast of 2-27-5. Petroleum Drilling Company's No. 15, southeast corner of the southwest of the southeast of the southwest of 26-26-9. Devonian Oil Company's No. 12, northeast corner of the northwest of 34-25-11. Tidal Osage Oil Company's No. 2, northwest corner of the southeast of the southwest of the southwest of 24-24-8; No. 14, northwest corner of the northeast of the northeast of the northwest of 25-24-8. Phillips Petroleum Company's No. 5, southeast corner of the northeast of the southeast of the southeast of 10-21-9. Moore et al's No. 6, southeast corner of the southwest of the southwest of the southwest of 11-21-9. Tidal Osage Oil Company No. 4, center of the west line of the southwest of 11-21-10. Titus & Norris No. 5, center of the west line of the southwest of 15-21-12.

Creek County—Magnolia Petroleum Company's Richards 4, northwest corner of the southeast of the southwest of 32-19-7. Waite Phillips Cobb 2, northwest corner of the southwest of 26-17-8; W. Alec 2, northeast corner of the southeast of the southeast of 27-17-8; E. Alec 2, southeast corner of the northeast of the southeast of 27-17-8; E. Alec 3, northwest corner of the northeast of the southeast of 27-17-8. Atlantic Oil Producing Company Fixico 2, southwest corner of the northeast of the southeast of 29-16-8. Wilcox Oil & Gas Company's Heneha 9, northwest corner of the southwest of the northeast of 2-15-8. Red Bank Oil Company's Martin 1, center of the northwest of the southeast of 13-18-10. Ter-

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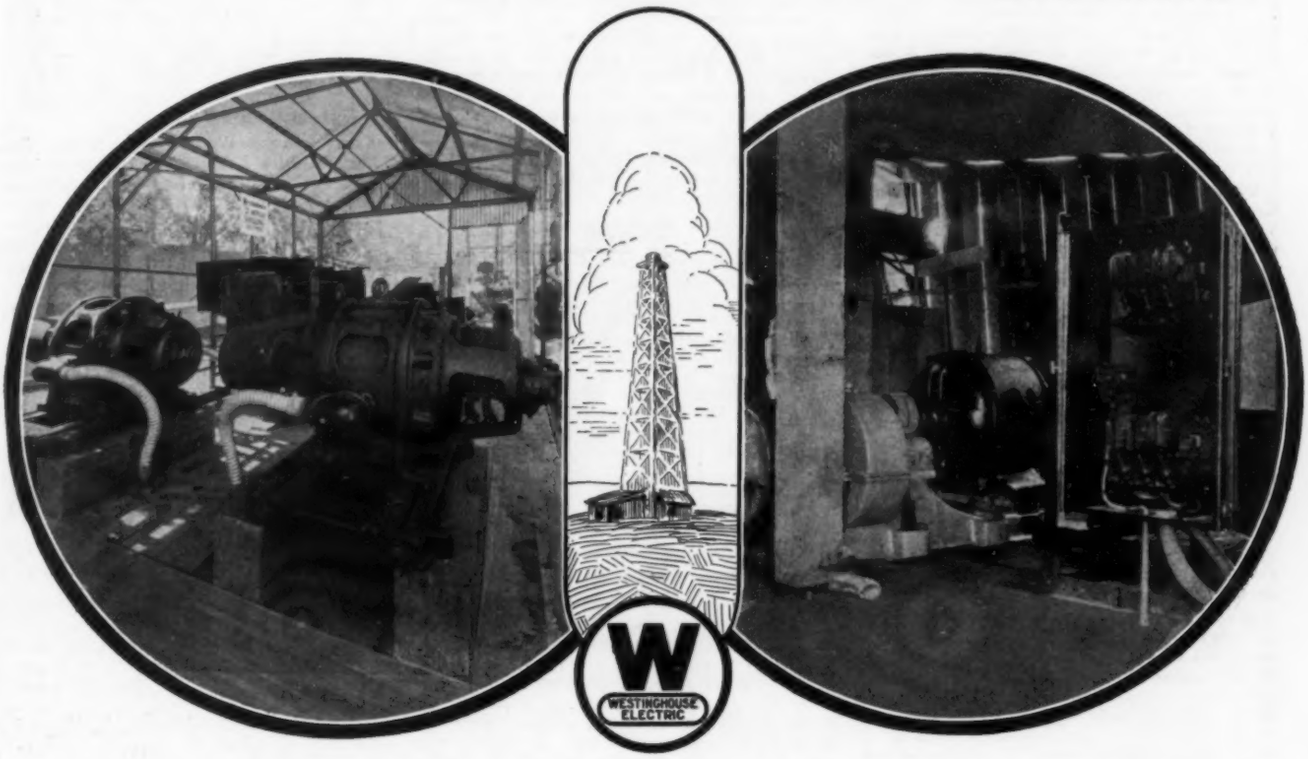

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rell et al's Imly 1, southeast corner of 4-18-11, old well deepened. Caskey & Agnew Townlot 1, northwest corner of the northeast of 6-18-12. Joemack Oil Company's Greenwood 2, old well deepened, southwest corner of the northwest of the southwest of 21-16-9.

Payne County—Amerada Petroleum Corporation Haley 4, northwest corner of the southeast of the southeast of 2-18-3.

Lincoln County—Magnolia Petroleum Company A. Sporleder 3, southeast corner of the northeast of the southeast of 34-15-5. Magnolia M. & F. Sporleder 7, northeast corner of the southwest of the southeast of 34-15-5. Texas Company's Hopkins 6-B, southeast corner of the northwest of the southeast of 2-14-5.

Tulsa County—Holmes et al's Island 2, center of the east line of the southeast of the southwest of 15-19-10. Sand Springs Home Oil Company's Fee 2, southeast corner of the southwest of the northeast of the northwest of 3-19-11.

Okmulgee County—Shaffer Oil & Refining Company Gibson 7, southwest corner of the southeast of the southeast of 17-15-11. Hammond Lee 5, southeast corner of the southwest of the southwest of 26-15-12. Nicholson Davis 1, center of the south line of the north half of the northeast of 23-11-13. Pulaski Oil Company Flesch 9, southeast corner of the northwest of the southwest of 36-12-12. Independent Oil & Gas Company's A. Wisner 2, center of the south line of the southwest of the southeast of 25-14-13. Papoose Oil Company's Rentie 6, southeast corner of the northwest of the southwest of 11-14-14. J. E. Wallace's Colbert 8, northeast corner of the northwest of the northwest of 14-14-14. J. G. Haas' Colbert 9, center of the south half of the northwest of 15-14-14, old well deepened. Transcontinental Oil Company's T. R. Beams 1, southwest corner of the northwest of 3-15-14. Pulaski Oil Company Adams 1-A, northwest corner of the northwest of 33-15-14.

Okfuskee County—Darby Petroleum Company's Callahan 1, northeast corner of the northwest of the southwest of 14-13-9. M. P. Evans et al's Morgan 1, southeast corner of the southwest of the southeast of 3-12-11. T. A. Johnson et al's Harjo 1, center of the southeast of the southeast of the northwest of 16-10-11. Schrock & Jameson Butler 1, center of the northwest of the southeast of the southeast of 26-10-10.

Seminole County—Gypsy Oil Company's Stepny 1, center of the southeast of the southeast of the northeast of 17-11-8. Independent & Atlantic Simon 1, center of the west line of 5-7-8. Magnolia Petroleum Company's Harjo 2, center of the west line of the northeast of the northwest of the northwest of 5-7-8. Harjo 3, center of the southwest of the northwest of the northwest of 5-7-8. Amerada Petroleum Corporation Frederick 1, northwest corner of the northeast of the northwest of 5-7-8.

Hughes County—Johnson & Ashe et al's Paldo 1, center of the northwest of the northwest of the northwest of 13-9-8. Sand Petroleum Company Hanage 1, center of the southeast of the southeast of the southeast of 10-8-9.

Grady County—Public Utilities & Clark & Cowden W. E. Smith 1, center of the southeast of the southeast of 12-6-7w. Pauline-Clark & Cowden's Roberts 1, northwest corner of the southwest of 23-5n-6w. Hall & Hall & Briscoe Ridley 1, center of the southeast of the northeast of 26-4n-8w.

Comanche County—Clyde Becker Hinds 1, northeast corner of the northwest of 30-4n-10w.

Stephens County—Eagle Creek Oil Company Brown 7, southwest corner of the northeast of the southeast of the northeast of 26-1n-9w. Knox Petroleum & Owl Oil companies' A. Dyal 1, southwest corner of the southeast of 7-1s-8w. Lone Star Gas Company Baptiste 1, old well deepened, southeast corner of the southwest of the southeast of 8-3s-4w.

Carter County—Coline Oil Company Pierce 8, center of the northeast of the northwest of the southeast of 7-2s-2w. Roxana Petroleum Corporation Caughman 1, center of the northwest of the southeast of the southeast of 7-2s-2w; Caughman 2, center of the northwest of the northeast of the southeast of 7-2s-2w. Amerada Petroleum Corporation Farve 22, southwest corner of the southeast of the southeast of the northeast of 20-5s-1e; Ledbetter 2, northwest corner of the southeast of the northwest of the northwest of 34-5s-1e.

Johnson County—Deese et al's Chastian 1, center of the southeast of the southeast of the northwest of 26-4s-5e.

Marshall County—McQuinn et al's Arbuckle 1, southwest corner of the southeast of the southeast of 26-5s-5e.

Wagoner County—Mitchel Bruner 1, southwest corner of the north half of the northwest of the northwest of 1-16-16. B. B. Wheeler's Murrell 1, center of the southwest of the southeast of the southeast of 8-16-18. M. A. Lowe's McIntosh 2, northeast corner of the southeast of the northwest of 7-17-15. A. E. Carder's Woodward 1, southwest corner of the southeast of 31-18-16.

Muskogee County—Herbert Oil Company's Foreman 1, center of the northwest of the northeast of the southeast of 14-13-18.

TEXAS

Archer County—Sun Oil Co., Dallas, W. R. Farmer 16, BCSL sur, 1900 ft to E and 2225 ft to S line; Falls C S L 1, blk 64, Falls CSL sur, 750 ft to N and 150 ft to W line. Texhoma Oil & Ref. Co., Wichita Falls, S. E. Oldham 7, E. Hubbell sur, 300 ft E No. 4; 8, same sur, 150 ft to W and 830 ft to S line. Ray-Featherston Oil Co., Wichita Falls, A. P. Nichols 17, blk 30, Amer. Trib. sur, 400 ft W No. 15. Maxon Co., First Nat. Bank Bldg., Wichita Falls, L. W. McCrory 5, blk 75, Amer. Trib. sur, 50 ft E No. 2. Humble Oil & Ref. British American Oil Prod. Co., Brown Bldg., Wichita Falls, M. C. Rogers 11, 1000 TE&L sur, 300 ft S No. 3. Gulf Prod. Co., Fort Worth, E. S. Monohan 24, 1599 TE&L sur, 400 ft N No. 23. P. Siegel 9, sec 22, Amer. Trib. sur, 50c ft E No. 2. Humble Oil & Ref. Co., Wichita Falls, L. F. Wilson 4, blk 125, Amer Trib. sur. Texas Co., Wichita Falls, R. E. Hill 17, 2408 TE&L sur. 300 ft NE No. 13. M & V Oil Co., Box 493, Wichita Falls, A. M. Kunkel 3, sec 3, BBB&C Ry sur, 300 ft N No. 2. Pet. Prod. Co., City Nat. Bank Bldg., Wichita Falls, L. F. Wilson 9, sec 29, Amer. Trib. sur, 340 ft E No. 5. B. F. Caldwell, 1714 8th St., Wichita Falls, J. R. Huchison 3, sec 123, Amer. Trib, sur, 300 ft S No. 1. Pandem Oil Corp., Waggoner Bldg., Wichita Falls, W. T. Hutchinson 5 sec 123, Amer. Trib. sur, 300 ft N No. 3. M. L. Lewis, Box 331, Wichita Falls, J. B. Miller 3, blk 19, Amer. Trib. sur, 300 ft W No. 2.

Atascosa County—Helvetia Oil Co., San Antonio, J. Weimers 13, Duck No. 334 sur, 200 ft SW No. 10.

Bexar County—Helvetia Oil Co., San Antonio, S. Smith 4, 505 ft N No. 15. W. C. McBride, Inc., 506 Olive St., St. Louis, Mo., A. F. Ernst 1, A. McSnyder 266 sur, 292 ft E and 1187 ft to S line.

Brown County—F. W. Stone & Co., Cross Plains, A. G. Gunn 5, W. B. Smith sur., 400 ft E No. 4. Lowe-Delaney & Carter, De Leon, J. T. Evrage 1, S. T. Allen sur, 170 ft to N and 160 ft to W line. Scrivner & Allen, Brownwood, J. E. Perkins 1, M. Strause sur, 1650 ft to S and W lines. A. Ratblatt & Co., Coleman, T. M. Jones 1, sec 35, TT Ry sur, 1060 ft to E and 150 ft to S line. Conway Bros., Box 41, Cross Plains, W. H. G. Chambers 3, 174 G. Longan sur, 375 ft W No. 1.

Baylor County—Bridwell & Heydrick, Wichita Falls, UCSL 3, blk 93, UCSL sur; 4, blk 36, same sur.

Brazoria County—Hyde Prod. Co., Humble Bldg., Houston, H. Masterson 1, M. Varner sur, 150 ft to N and 300 ft to W line.

Callahan County—J. C. Van Bebber, Putnam, Grant 6, sec 318, SP Ry sur, 1700 ft to S and E lines. Prairie Oil & Gas Co., Ranger, E. J. Eubanks 3, sec 4, D&D Asy sur, 340 ft S No. 2. H. I. Stock, Cisco, J. L. Woods 3, 2277 TE&L sur, 300 ft to N and 600 ft to W line. White, O'Byrne, Thomson & White, Moran, H. W. Warren 1, 2039 TE&L sur, 325 ft to N and 150 ft to E line. Dailey & McGee, Box 145, Cisco, W. C. Clements 3, No. 16, Bayland Asy sur, 300 ft S No. 2. J. R. Tolbert, Putnam, W. D. Clinton 1, sec 15, Bayland Asy sur, SE cor. H. M. Henderson, Box 16, Breckenridge, J. S. Burnam 2, 2288 TE&L sur, 450 ft to N and 150 ft to E line. Swindler & Willmott, 711 W 6th St., Cross Plains, D. E. Parks 6, 2972 TE&L sur, 150 ft to N and 1030 ft to E line. E. L. Stratton, Box 711, Cisco, L. J. Sikes 1, 2289 TE&L sur, 150 ft to N and 450 ft to W line. Kirk & Brewer, Gorman, J. M. Harlow 1, W. Converse sur, 1159 ft to E and 250 ft to S line. Mook-Texas Oil Co., First Nat. Bank Bldg., Fort Worth, L. H. McDonough 6, J. Knight sur, 325 ft S No. 1. C. M. Root, Eastland, W. Arrowwood 7, blk 52, CCSL sur, 450 ft to N and 750 ft to E line; 8, same sur, 150 ft to E and 775 ft to N line. Canyon Oil & Gas Co., Cross Plains, M. Kennedy 2, sec 11, Bayland Asy sur, 150 ft to S and W lines. W. R. Andrews et al, Putnam, Mrs. R. D. Williams 47, 2974 TE&L sur, 660 ft to S and W lines.

Clay County—Western Oil Corp., Brown Bldg., Wichita Falls, J. J. Danley 1, blk 60, PCSL sur, 450 ft to S and W lines; V. Camp 1, blk 40, same sur, 525 ft to W and 150 ft to N line.

Crockett County—J. S. Cosden, Inc., F&M Bank Bldg., Fort Worth, W. Noelke 1, sec 39, HE&WT Ry sur, 330 ft to S and E lines.

Coleman County—Canyon Oil & Gas Co. & Cromwell Oil & Gas Co., Cross Plains, J. W. Harris 10-A, Wm. Mason sur, 400 ft S No. 8.

Caldwell County—Witherspoon Oil Co., San Antonio, F. A. Cardwell 15, J. Burleson sur, 217 ft NW No. 11; 16, same sur, 317 ft SE No. 1.

Eastland County—Eastland Oil Co., Eastland, W. H. White 1, blk 6, H. Kendrick sur, 175 ft to N and 300 ft to E line. P. L. Hoffman, Big Lake, W. H. Kilgore 1, No. 152 H. McClure sur, west central.

Fannin County—Payne & Bond, Magnolia Bldg., Dallas, R. H. Owens 1, F. Crenshaw sur, 600 ft to E and 220 ft to S line.

Fort Bend County—Union Sulphur Co., Sulphur, La., T. W. Davis 42, M. Young sur.

Guadalupe County—United North & South Oil Co., Luling, A. J. Baker 31, H. Cottle sur, 430 ft SW No. 21; J. E. Allen 36, same sur, 334 ft S No. 20.

Glasscock County—Mascho & Marland Oil Co., 1015 Elizabeth St., Dallas, N. Calder 1, sec 20, T&P Ry sur, center.

Harris County—P. S. Griffith, Box 1183, Houston, Fee 1, blk 9, W. Britton sur, 150 ft to S and W lines.

Hutchinson County—Centerfield Oil & Ref. Co., Amarillo Bldg., Amarillo, Smith 1, sec 10, blk Y, M&C sur, 990 ft to N and 330 ft to W line. G. H. Williams & Phillips Pet. Co., Box 82, Amarillo, G. E. Montgomery 1, M. Whitley sur, 330 ft to N and E lines.

Harris County—Industrial Gas Co., Marshall, W. M. Bell 1, T. D. Wilson sur.

Jim Hogg County—O. W. Killam, Laredo, R. Holbein 1, sec 2, blk 2, Las Animas sur, 150 ft to N and E lines. Simms Oil Co., Magnolia Bldg., Dallas, R. Palacios 1, sec 233, M. Carleton sur, 150 ft to N and E lines blk.

Jefferson County—Poich & Telschow, 2309 Chenevert St., Houston, Trembley 2, blk 7, J. H. Veatch sur, 120 ft to E and 12 ft to N line.

Live Oak County—Houston Oil Co., Houston, H. Cartwright 15, J. M. Colchade sur, 2400 ft SE No. 12.

Limestone County—W. S. Yoder, Mexia, V. Strother 1, W. G. McKenzie sur, 150 ft to N and E lines.

Milam County—Jennings Oil Co., Yoakum, Branch-Coulter 11, T. J. Chambers sur, 320 ft S No. 10. National Ref. Co. & C. F. Nelson, Cleveland, Ohio, L. S. Dilworth 3, J. J. Acosta sur, 1165 ft to SE and 800 ft to S line. Clear Lake Oil Co., Rockdale. H. T. Coulter 9, T. S. Arnett sur, 300 ft SW No. 8. Samuels & Baggat Bros., Rockdale, H. A. Branch 2, T. J. Chambers sur, 150 ft to N and E lines. W. A. Jones, Minerva, T. Phillips 1, T. J. Chambers sur. 150 ft to S and E lines; 2, same sur, 375 ft W No. 1.

McLennan County—D. E. Hirshfield, Amicable Bldg., Waco, J. W. Cooper 1, T. H. Barrow sur, 3500 ft to W and 1800 ft to S line.

Navarro County—Homaokla Oil Co., Col-

cord Bldg., Oklahoma City, Okla., J. J. McGaw 5, 687 ft SW No. 1.

Orange County—Rycade Oil Corp., Humble Bldg., Houston, Texas 11-B, Cow Bayou sur, 2000 ft N of bridge.

Panola County—J. H. Askew, 455 E. College St., Shreveport, La., E. C. Tilley 1, J. Thorpe sur, 300 ft to S and E lines.

Shackelford County—Smith & Brady, Box 1082, Vernon, W. McLemore 1, sec 124, P. K. Clark sur, 527 ft to W and 1076 ft to S line. H. N. Chapman, Waxahachie, F. W. Alexander 4, sec 15, LAL sur, 300 ft W No. 1. Mahlstedt Oil Co., Fort Worth, A. M. Russ 1, sec 39, T&P Ry sur, 150 ft to S and E lines. J. D. Meridith, Moran, L. T. Wild A-2, sec 15, Univ Lands sur, 90 ft S No. 2-C. Roberts et al, South Bend, C. Arndt 1, 597 TE&L sur, 150 ft to S and E lines. Bearman & Francis, Gude Hotel, Cisco, J. Hayward 1, sec 117, Univ. Lands sur, 150 ft to S and E lines. Milham Corp. of Texas, Travis Bldg., San Antonio, J. F. Sedwick 1, 1561 TE&L sur, 450 ft to S and W lines. Duffy, Mout ay & Goodloe, Cisco, C. B. Snyder 4, sec 26, LAL sur, south central. W. R. Temlinson, 1503 South Ave. D, Cisco, B. Brooks 2, sec 91, Univ. Lands sur, 390 ft E No. 1.

Stephens County—Price-Russell Co., Ranger, M. C. Bruce 7, sec 50, blk 6, T&P Ry sur, 160 ft to W and 700 ft to S line. Texas Pacific Coal & Oil Co., Ranger, C. Binney 61, sec 52, blk 4, T&P Ry sur, 650 ft to W and 1850 ft to S line. J. R. Eidson, Hamilton, J. H. Houston 1, sec 32, T&P Ry sur, 500 ft to N and 330 ft to E line.

Starr County—O. W. Killam, Laredo, V. C. Guerra 1, sec 43, 1940 ft to E and 1320 ft to S line.

Scurry County—E. E. Fogelson, Dallas Athletic Club, Dallas, Bryce 1, sec 133, H&TC Ry su., 330 ft to S and W lines.

Throckmorton County—Bridwell & Heydrick, Wichita Falls, UCSL 2, blk 27, UCSL sur; 1, blk 154, same sur.

Upton County—L. E. Hults, 1116 Washington St., Fort Worth, Halff 1, sec 76, blk Y, TC Ry sur, center.

Wichita County—E. J. Stump & Co., Harvey Snyder Bldg., Wichita Falls, Mangold 1, C. A. Mangold sur, 150 ft to N and W lines. Culbertson Co., City Nat. Bank Bldg., Wichita Falls, J. & J. Waggoner 34, sec 13, BS&F Ry sur, 1950 ft to N and 660 ft to W line. Gulf Prod. Co., Fort Worth, J. L. Waggoner 2, H. George sur, 300 ft N No. 1. Shappell Oil Co., Box 436, Wichita Falls, S. H. McCarty 7, W. R. Eaves sur, 300 ft NW No. 5 McClure & Sons, Iowa Park, W. D. McClure 7, sec 5, GC&SF Ry, 300 ft S No. 6. Pierce & Brown, Amer. Nat. Bank Bldg., Wolters, Okla., B. Rexford 1, CT Ry sur, 450 ft to N and 860 ft to E line. Eddy, Gray & Schroeder, 209 W. Fourth St., Burkburnett, E. F. Gaston 3, J. Walker sur, 450 ft to W and 228 ft to N line. J. A. Gardner, Harvey-Snider Bldg., Wichita Falls, J. A. Watkins 8, B. Balch sur, 400 ft to N and 150 ft to E line. Hazlitt-Simmons Corp., W. T. Waggoner Bldg., Fort Worth, E. Bentley 1-B, R. Gerrigan sur, 50 ft W No. 2 Pandem Oil Corp., Waggoner Bldg., Wichita Falls, J. L. Jackson 1, sec 23, DCSL No. 4 sur, 150 ft to S and 781 ft to W line.

Wharton County—Gulf Prod. Co., Houston, A. P. Borden 1, H. Griffith sur, SE cor; E. M. Chase 1, S. F. Austin sur, 500 ft to S and 50 ft to W line.

Webb County—Conway, O'Byrne, Minthan & Bailey, Hamilton Hotel, Laredo, C. G. Palacios 1, No. 201, blk 22 sur, center of blk 22. W. C. Ritcheson et al, Hamilton Hotel, Laredo, A. S. Billings 1, sec 71, blk 1, CCSD&RGNG Ry sur, 1431 ft to E and 956 ft to N line.

Young County—Tidal Oil Co., W. T. Waggoner Bldg., Fort Worth, R. Campbell 17, 1483 TE&L sur, 400 ft E No. 14. W. J. Green, Wichita Falls, N. Wilborn 1, 1588 TE&L sur, 150 ft to S and E lines. Ilseng Prod. Co., F&M Bank Bldg., Fort Worth, Prideaux 1, blk 17, W. J. Fraley sur, 150 ft to N and E lines; 2, blk 4, same sur, 150 ft to S and 450 ft to E line; 3, blk 14, same sur, 150 ft to S and 750 ft to E line.

EXTRA *TIGHT*—EXTRA *DURABLE*

The market offers no tank material superior to rust-resisting Keystone Copper Steel. The quality and weight of this material account for MALONEY durability records. Absolute tightness is assured by the patented "crimp" which gives accurate fit at seams and joints—by our special gasketing material,—and by our method of reinforcing seams with strong steel strips and channels.

After many years in the business, we do not know how a greater tank value could be offered.

"Buck" Type Vacuum Pressure Valves and Vacuum Breakers Furnished

MADE OF KEYSTONE COPPER STEEL

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Sizes: 12 to 3,000 Barrels
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A Tool That Is Better and Cheaper Than Fish Tail Bits

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Construction—
Constructed stronger than a fish tail bit, with replaceable cutters, that are absolutely solid and durable.

Operation—
Time can be saved because it will stay in the hole longer in any formation, than a fish tail bit, and cutters are always easily and quickly replaced.

Economy—
Cutters can be redressed and built up with high grade self hardening steel, at a nominal cost insuring more footage per pound than any other tool on the market.

Buy It!
Use It!

Fully Guaranteed to do the work cheaper and better than Fish Tails.

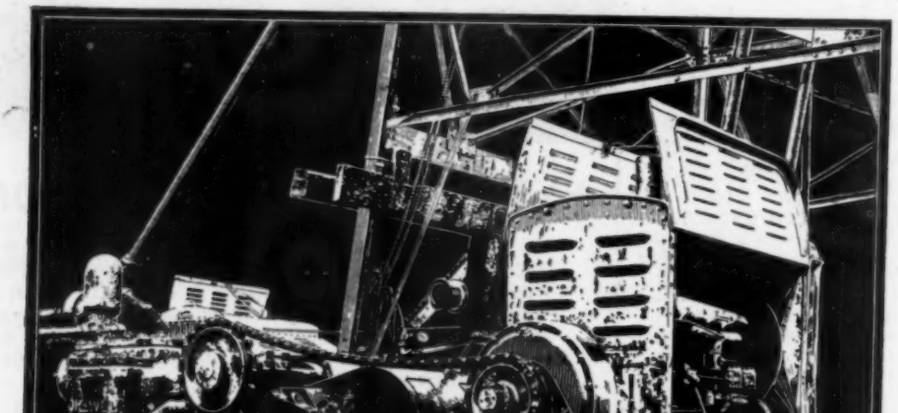
Stronger than Fish Tails
Easy to Operate
Saves Time and Tool Money

Write for information

MANUFACTURED IN 2, 3, AND 4-WAY CUTTERS BY

Painter Bundy Tool Co., Inc.
Wichita Falls, Texas

100 *H. P. Waukesha Power Unit Driving an "Oilwell" Imperial "Mud Hog" Pump.*



Waukesha Standardized Oil Field Power Units

From Alaska to South Africa, in the Himalayas and the Andes, in Ceylon and Venezuela you will find Waukesha engines on the job not only pumping mud, water and oil and drilling wells, but also driving air compressors, propelling excavators for laying pipe lines and operating road building machinery.

Standardize on Waukesha Oil Field Power Units for pumping and drilling. They are sold by men who know the oil business. Ask any direct representative listed below, or Oil Well Supply Co., men about them. Write for the "Oil Field Bulletin", giving full details.

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Exclusive Builders of Heavy Duty Gasoline Engines for Nearly Twenty Years

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Replaceable Cutters Give New Rotary Bit Great Speed

A type of rotary bit that has replaceable cutters doing the work of an ordinary fish tail bit is being manufactured by the Painter-Bundy Tool Company, Inc., Wichita Falls, Texas, and marketed under the trade name of the Painter Replaceable Cutter Rotary Bit. New features have been embodied in this bit that permit greater speed and less bit cost per foot in drilling, with fewer fishing jobs, according to the claims of the manufacturer. Only high quality materials are used in the making of these bits, and the main body is said to be almost indestructible, while the high grade steel used in the cutters affords maximum footage in all formations.

Painter-Bundy Rotary Bit with Detachable Cutters.

The Painter rotary bit is made in standard sizes varying from 6¼ to 11-inch, while odd sizes are made to order upon request. The main body, or head of the tool, is not subject to any appreciable amount of wear while making hole. The main body is made from a good grade of carbon vanadium tool steel, and is so constructed that it permits the use of different sizes of cutters, as well as different shaped cutters. Three types of heads, or main bodies are made for the purpose of using two-way, three-way and four-way cutters. The latter type being designed to take cores of the formation while drilling when desired.

The cutters are designed to fit in the main body of the bit in tapered slots, which automatically tighten as the weight of the drill pipe and bit presses the cutters to the bottom of the hole. These cutters cannot wear loose, and because of their comparatively small size a high grade of steel can be used in their manufacture without involving the expense of a fish tail bit. After becoming worn through usage, the cutters can be built up and refaced with high speed self hardening steel at a small expense, and the same operation can be repeated many times on one set of cutters. These cutters are securely attached to the bit by a sleeve that slips over the main body, with a lock-screw holding the sleeve in place. The cutters are removed by taking off the sleeve, and the operation can be done by one man, while it is not necessary to break the tool out of the drill collar.

The circulation of mud through the Painter bit is somewhat similar to the principle used in drilling with fish tails, except that the water hits in the center of each cutter, thereby keeping the blades cooler and cleaner at all times.

Additional information will be supplied by the company upon request.

Pipe Wrapping Machine Applies Protective Coating

Among the recent items of new and improved oil field equipment to be offered the industry is the Wieland Pipe Wrapping Machine, announced by C. F. Wieland, Consulting Engineer, 703 Market Street, San Francisco, California.

The purpose of this machine is to apply to pipe a final heavy coating of asphaltum, bitumen or other kindred material, in fluid state, and to guard this against abrasion by simultaneously spirally wrapping onto the pipe, a fibrous saturated covering in sheet form.

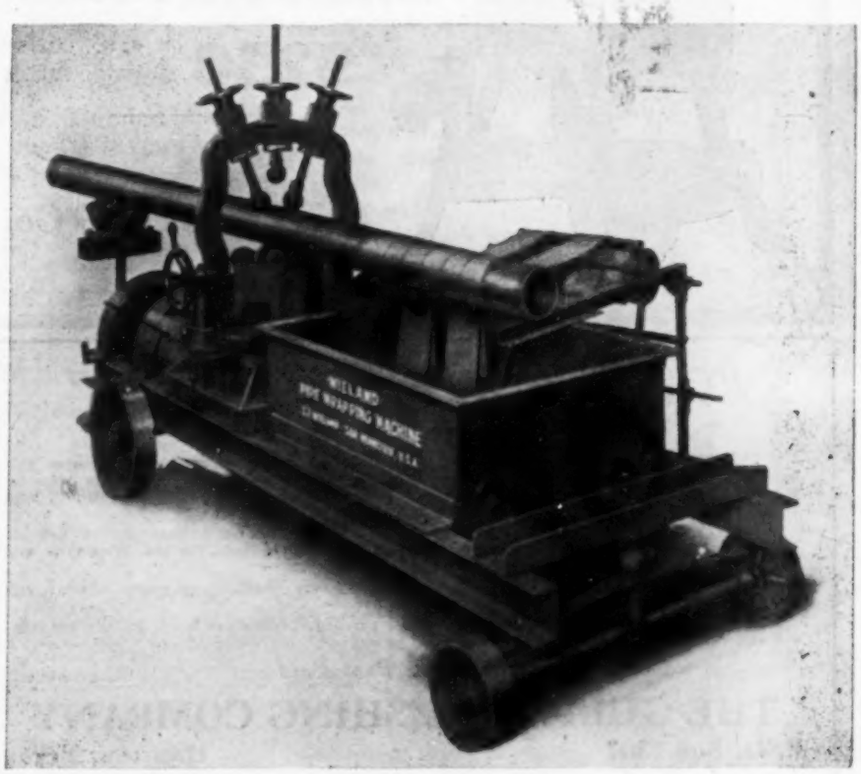
For convenience in handling while on field work, the pipe wrapping machine is mounted on a structural steel chassis. For permanent installation the chassis may be dismounted from the wheels and set on a concrete foundation.

Power is furnished by a gasoline engine, but the outfit can also be equipped with a motor. The power drive is through a steel worm and a horizontally disposed phosphor bronze worm wheel enclosed in the oil filled base of the turret. Two circular racers or bed plates are centrally superimposed on the turret base worm gear cover. Each racer has a setmetal traversing rack cut on its face. The lower racer carries the live roll stand. The upper racer carries the pressure roll yoke.

The live and pressure rolls are adjusted to the desired pitch of spiral by traversing the turret racers clockwise and counter-clockwise simultaneously. This is accomplished by means of the traversing gear handwheel, which operates the traversing rack pinions through suitable mechanism enclosed in the traversing gear pedestal. The operator maintains the width of side-lap through the same spiral control or traversing gear handwheel.

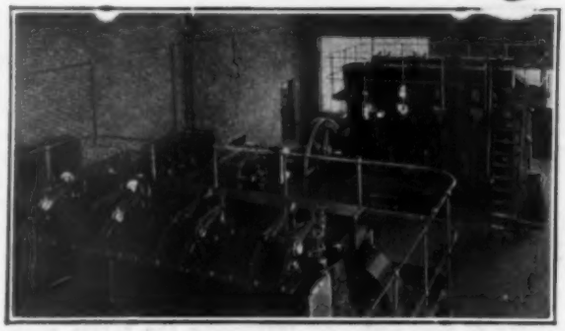
The live roll shafts do not change position vertically. The load—the weight of the pipe—is borne by the live roll stand. Position of the pressure—upper—rolls is radially adjusted to the diameter of pipe. The upper rolls are under spring compression, thus compensating for any slight irregularity on the pipe surface and assuring uniform contact therewith. The rolls drive the pipe spirally forward toward and over the coating tank—to what may be termed the finishing end of the machine.

The turret rolls have rubber tread. Soft tread rolls do not cut through the



Wieland Pipe Wrapping Machine

De La Vergne



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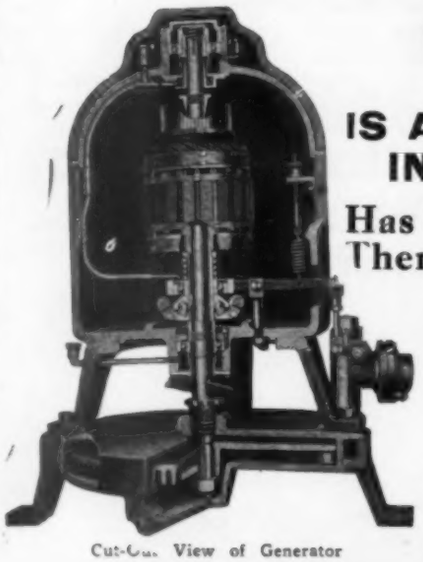

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"OIL FLOW IN PIPE LINES"

By R. S. DANFORTH, Contains charts as follows:

THE PRESSURE LOSS is shown at once for any capacity in barrels per hour or gallons per minute of any Saybolt or other viscosity oil. The charts are based on tests by Messrs. Stanton & Pannell of the National Physical Laboratory of Great Britain and checked by many experiments of oil companies in the United States.

THE VISCOSITY CONVERSION CHART shows the equivalents of the Saybolt Universal and Furol, Engler, Redwood, Redwood Admiralty, Absolute and Kinematic viscosities.

THE HORSE POWER CHARTS show the power required to pump against any working pressure with any efficiency of pump and drive.

Also the conversion of capacities in barrels per day, barrels per hour, gallons per minute and cubic feet per second.

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priming coat nor the surface of the metal pipe, therefore the protecting value of the priming coat is preserved. Threaded pipe may be wrapped without damage to the threads while being driven through the rolls.

Two pipe supports, each having two rolls in tandem, to receive the pipe from the stock pile are furnished. The pipe supports are on swivel bases for traversing their rolls to synchronize with the angle of spiral of the machine turret live rolls.

A vehicle with adjustable pipe support to receive the free end of the pipe as it leaves the finishing end of the machine, is furnished.

The fibrous sheet of pipe covering is led down into the tank over a series of tension and guide rollers, thence upwardly, carrying with it the liquid coating and applying it to the surface of the pipe. The pipe covering, under suitable tension, is spirally wound—bandage-wise,—onto the pipe. The side-lap may be adjusted to the width desired.

Both sides of the pipe covering are wet during its travel through the tank. That the joints or length of pipe may not adhere to each other when stacked, the pipe is rolled in a bed of sawdust or grain hulls as it leaves the machine.

Further information will be supplied by C. F. Wieland, Consulting Engineer, 703 Market Street, San Francisco, California.

Prairie Pipe Line Shipments 52,392,467 Barrels in 1925

Tulsa, Oklahoma. — An increase in the oil runs of the Prairie Pipe Line Company brought the crude shipped by that concern during 1925 up to the total of 52,392,467 barrels. This compares with the 42,655,145 barrels run during the previous year.

The shipments from the Mid-Continent are by the Prairie Pipe Line Company during the past year are as follows:

Month—	Total Shipments	Daily Average
January	4,441,290	143,268
February	4,322,556	154,377
March	4,923,929	158,836
April	4,415,855	147,195
May	4,719,835	152,253
June	4,716,115	157,204
July	4,823,612	155,685
August	4,318,497	139,306
September	3,688,343	122,945
October	3,990,645	128,730
November	3,850,769	128,359
December	4,182,026	130,409
Total	52,392,467	143,503

W. C. Thomas, general superintendent of production, and Louis Lenz, chief engineer for the Vacuum Oil Company, made a business trip to Lockport, Louisiana, last week.

West of the Mississippi— Stores Everywhere

East of the Mississippi— The Frick & Lindsay Co.

When You Spend Your Money For Sucker Rods

WHAT DO you hope to get when you spend your money for Sucker Rods? You don't care what sort of steel is used, although manufacturers like to tell you. You don't care what the box and pin look like although manufacturers show you pictures. You don't care about heat treatment although manufacturers dote on it.

Again: What do you hope to get when you spend your money for Sucker Rods?

There is but one answer —Dependability. Nothing animate or inanimate is worth a whoop unless it be dependable.

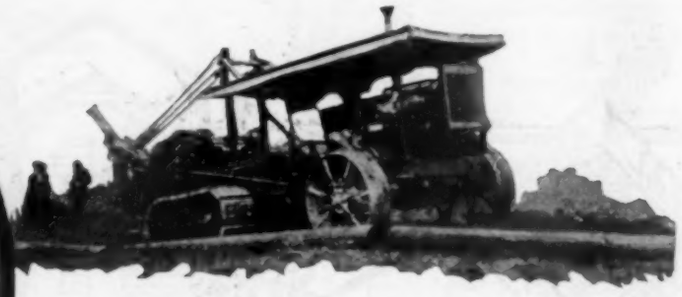
Last month in the Oil and Gas Journal—December 17th, to be exact—we told a story with words and pictures about fishing out 200′ of ⅝″ Axelson Sucker Rods, 290′ of 2″ tubing, and 98′ of 6⅝″ liner FULL OF MUD.

This immense load was brought out by the hold on the Sucker Rods, caught with a socket, and the incident emphasized the dependability of Axelson Rods.

Like the elevator boy, the business of Axelson Rods is up and down, up and down, at which they are faithful beyond words to describe. But if any unusual condition arises, you will always find that Axelson Rods have also that fine quality known as dependability, and that is what you hope to get when you spend your money for Sucker Rods.

Frick-Reid Supply Co.

In Oil Country Equipment—the most HUMAN organization in America



The Buckeye Set the Pace—

1848 Feet per Day

In 50 days Clarence Stewart, of Lima, O., completed a 17½-mile gas line.

Trenched across county, up hills and through small streams, averaging 4-ft. deep and 24-in. wide.

A 4-A Buckeye cut the trench. A Buckeye Back-Filler moved the dirt back when the pipe had been laid.

And they averaged 1848 feet a day—proof enough that Buckeye's "30 years of knowing how" assures big yardage at low cost.

Ask the owner.

THE BUCKEYE TRACTION DITCHER CO.
Findlay, Ohio

Manufacturers of Pipe-Line Trench Excavators and Pipe Screwing Machines

There's a Buckeye Sales and Service Office Near You

BUILDERS OF TRENCH EXCAVATORS FOR OVER 30 YEARS

Say you saw it in The OIL WEEKLY

LETTERS OF Paul Peebles P.S.G.

hunny I gess yu hav herd that they hav found three moar salt dume feelds in the gulph coast as yu proberly reckerleck I told yu they wood about this time, but as usual I do not get no credick for lokatin them nor neether no cash, on acccunt of it was sum other fellers said that they lokated them. but all the saim hunny yu no that I sed it was a feeld at evry 1 of them plases. well I got to talkin around & they cum in hear with the seesmoregrafts & torshun balantses & went ahed 2 sea if they wood werk where I sed they wood & now they hav got there feelds & I am cleen forgot about in it. I gess things is gettin sos that a reel geeologists aint got no shot & I miteswell quit the geeology bizness & put all of mi time 2 inventin, because I am way ahed of the buntch in findin feelds, but I am kinder behine with mi inventin as I aint invented nuthin in sevral weeks.

in fack hunny I hav bin so bussy with afares on the side that I aint atended 2 mutch reel bizness of enny kind on account of it is so menny things 2 take up a fellers time along in the fall of the year & along about crismus & new yeres. & now along cums the instertoot meetin 2 take up sum moar of mi attenshun & then the conversashun bord up 2 washington will probly want me 2 cum up there 2 tell them what 2 tell the pres. about is it enny oil & if so how mutch.

but befoar I giv up mi atenshun 2 the finnesses of the geeology bizness I am goin 2 make 1 moar atemp 2 giv out a theery on the formashun of salt dumes whitch can be standerdized on bi evrybody & save a hole lot of geeologistis a lot of time & also a hole lot of expents of the oil co's whitch hires them & pays them munny 2 sit around a offis & smoak there pipe & kid with the palentologistis. now hunny yu do not need 2 go thinkin nuthin about me menshunin geeologists even if they is laddys most of the time because I aint never got nowheres with 1 of them yet. I admit hunny that I did try 2 start sumthin with 1 onest, only I asted her how ole did a fossel hav 2 be bfore a palyintoligist wood notis him & she told me that I was a long way from that ole miself. I gess yu no what she ment, hunny.

well as I sed I am goin 2 make a standardized theery on the formashun of salt dumes, & this is it.

a salt dume is sumthin whitch it aint but a few peeple has got enny ideer what it is or how cum. the only thing is that it is quite generly conseeded that it is the same on both sides, but they aint never found out yet about the top & the bottom. neether is it noed how old they are, but as salt will keep pretty good it is conseevable that they are pretty old & even mite hav got in on the ground floor of creeation, only they aint menshuned befoar the flood, but a lot must abin noed about them in erly historical times on acccunt of lot's wife terned 2 1 & also it says sumthin about the salt of the erth. well salt dumes is pilllers of salt & also salt of the erth.

but that aint neether hear nor there when it comes 2 ansering the ? what is a salt dume & how cum? it is the saim kind of a ? as what is granite made out of & also all the rest of the werld & it aint noboddy noes what it is, but this is how cum it is, or what I meen is that this is how cum it is salt dumes. well I gess yu hav herd that the erth was 1 time hotter than—well ennyway it was kinder hot 1 time & she got cooled off on the outside first sos that it was a crust on the outside & the watter was all steem around it, escept it was a few cool spots mabe where adam & them fellers lived whitch aint noboddy noes wher it was at, but the watter was neerly all made up in steem & clouds sos that noar was the onliest 1 what noed it was goin 2 be a rane when the wether man sed it was goin 2 be.

well evrything bein so hot down in the erth it was all melted & gas, so that the granite was liquid like yu hav seen them porin babbit & the salt was gas. yu sea hunny granite & salt is the 2 prinsipal things whitch the erth is made out of. well when the erth got solid all over the insides & cooled off enuff on the outsides sos that the watter cood quit bein steem & clouds all arcund it, well then cum noars rane & the flood cooled off the erth so fast that she shrunk like a waggin tire does on a wheel, only moar like that & sum-

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Jones Sucker Rods
have pleased for
Thirty Years.
S. M. Jones Company,
TOLEDO · OHIO

thin was bound 2 bust. well the salt gas bein the easiest 2 move around, well it blowed threw the crust like a inner tube leekin whitch has put salt all over the cuntry escept in sum plases where it aint none hardly. so while all this was takin place it was sum plases whitch was kinder sandy like down by the gulph coast where it was a blow out instid of a slow leek in the casin & where they blow outs is where the salt dumes is at. well when the salt gas was blowed out it was under pretty high pressure like they put asettyleen in a iron silynder, only moar so & when she cooled off a little she terned back 2 salt & swole up & kinder busted up things in general, whitch I meen is that it pushed the formashuns around sumthin skandalus whitch is the reesen they are like they are now.

well of corse that made a kind of a hill whitch is the reesen that we hav salt dumes. the salt is also noed as salt plugs on acccunt of they stopped up the holes in the erth where it was blowin out whitch kept the hole thing from blowin out & they hav also kept the werld from bein a flat tire.

now as 2 how cum oil around salt dumes is still anuther ?, but that can be standerdised on after we hav got it settled how cum the salt dume. ennyway a salt dume is only a good excust for lookin for a oil feeld & sumtimes they find the oil bi the salt & moar often they just drill there. & then agin sum fool will drill sumwheres elst & strike it, so reely it aint no sents in lookin for oil bi a salt dume than ennywhere elst, only a salt dume is handy 2 no when 2 quit because when yu run in2 the salt well yu no it is time 2 move more farther away from the dume, while if yu was just drillin around ennywhere the only way yu wood no when 2 quit was when yu went broke or lost the hole.

I no hunny that yu bein a woman will think kiner like sum other peeple that it is foolish 2 think that salt was evver gas, but it is a noed fack that if salt wood be got hot enuff it wood be gas & also that enny gas can be compressed if it is power enuff put on it. also it is noed that if a solid like salt is made in2 gas & then compressed 2 say one thousandths of its volyume & then allowed 2 cool so that the gas terns back 2 a solid & the salt gets reddy 2 move sumthin is bound 2 happen. all the salts is like that hunny. yu no what a handful will do, well just figger what happens when it is enuff 2 make a rocky mountain.

so that is what I am goin 2 offer for a standerdized theery on what is a salt dume, & it aint noboddy that noes enny better but what it is rite. & it dont make a very mutch of a difrents after all, only us mens of scients just wants 2 no about things like that, & sum of the lesser lites in the geeology perfession wastes a hole lot of time tryin 2 figger it out.

yore lovvin paul.

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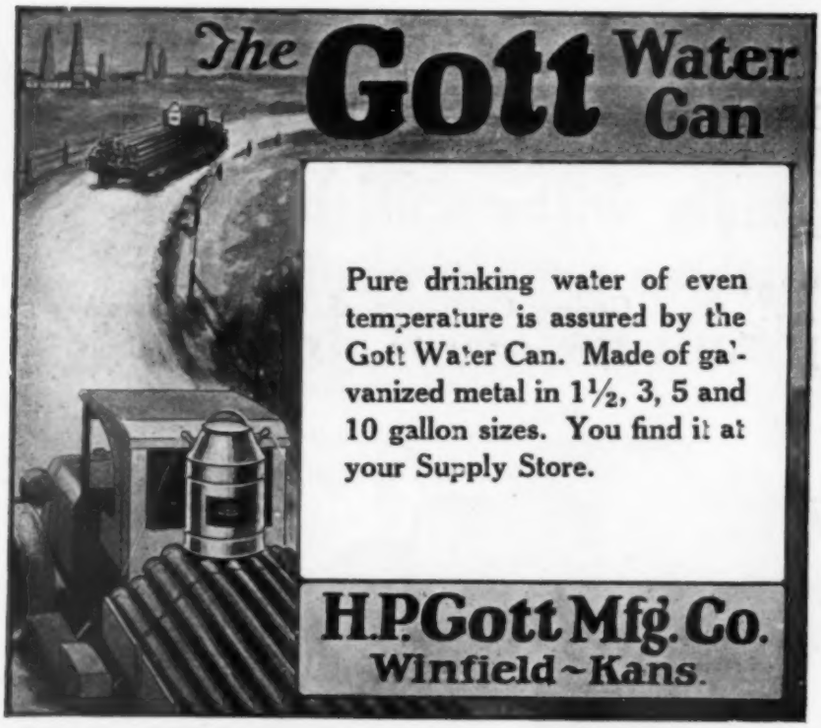
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Deeper Zone Offers Possibilities For Englewood Future

(Continued from Page 66

ground structure is northwest-southeast, very much like that of all other structures in the Beverly Hills to Newport Uplift.

Oil Zones

Unlike the oil zone of most fields in Southern California, where the crest of the structure lies nearest the surface, in this field the wells on the crest of the structure encountered their first oil showings at about 1100 feet and made water shutoffs at 1160 to 1250 feet. Because of the fault and erosion, the shallowest oil showings were those found in Standard-L. A. Investment 1-1 well and Pacific-Baldwin 24. In both of these wells oil showings were logged within 900 feet of the surface and Pacific-Baldwin 24 was one of the shallowest water shutoffs at 1150 feet. The shallowest water shutoff is that of Pacific-Baldwin 35 at 1100 feet.

In Inglewood field it has been the practice to pass up the top showings of heavy oil, owing to lenticular gray sand bodies within the first 50 or 100 feet of the zone. Enough wells made their first water shutoffs too high to prove the presence of water in such gray sands and to justify what became the established practice in the field.

On the crest of the field, the oil zone is about 1300 feet thick. Around the rim of the field edgewater was found in the zone at about 600 to 800 feet from its top. With rapid development and the withdrawal of oil from the zone, edgewater has now encroached from the north in a southeasterly direction until it has reached the top of the structure. The 600 feet of formation lying above the edgewater is good for an average production of 200 to 400 barrels. The main production has come from the 400 feet of formation lying below the water, and varied from 1000 to 4000 barrels.

Thickness to West Not Known

West of the fault, in the central part of the field, the total thickness of the oil zone has not yet been determined. Shell-Rindge 9 demonstrated a total thickness of 1658 feet, but other wells have not drilled into the zone so deep. Common practice has been to limit penetration of the zone to 1300 feet.

East of the fault, the edgewater condition is found in wells far down the dip, lying in approximately the same position as west of the fault. Unfortunately, however, east of the fault development work has also found a gray sand lying within 350 and 400 feet be-

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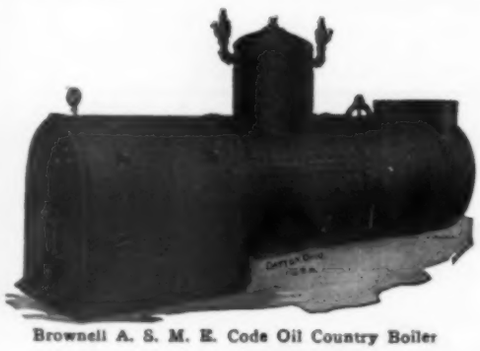

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low the intermediate water. One well drilled below this gray sand and was so near the fault zone that there is serious doubt as to whether it represents a fair test for the eastern part of the field. It seems, however, that such deeper sands, as are indicated in Shell-Rindge 9, will not be more extensive than the upper sands in the field.

Additional Oil Zone Certain

Thus far, most of the deep test wells have been drilled outside of the present proven productive area, and little more is known concerning the absence or presence of the deeper sand than is demonstrated by the two wells mentioned above.

That an additional oil zone will be developed in the future is certain, but one cannot safely forecast the extent or probable importance of such development.

Oil which occurs above the edgewater varies in gravity from about 13 degrees to 18 degrees; that which occurs below the intermediate edgewater varies in gravity from 18 degrees to 22 degrees. The gravity of the oil produced by Shell-Rindge 9 well, which penetrated 1658 feet of zone is over 29 degrees. It is fair to assume, therefore, that the 358 feet of zone below the 1300 feet generally developed contains an oil even lighter than 29 degrees gravity. As in most California fields, the oil is heavier around the edges of the field. In those wells where edgewater is encountered, the oil is particularly heavy.

In the cross sections herewith, the zone has been divided into an upper and lower zone for the purpose of illustration, but in the field it has generally been treated as one unit, since most of the wells have taken all of the zone.

About 25 wells around the rim of the field cemented one string of pipe above the upper zone and a second string of pipe below the intermediate edgewater. These wells still remain clean, while neighboring wells higher up the dip are beginning to show water.

The largest well in the field was Petroleum Securities-Rubel 9, completed June 13, 1925, at 2455 feet, with an initial production of 4667 barrels of 23.6 degrees gravity oil. Owing to the fact that so many wells were completed almost at the same time, there were several other wells with a production nearly as great as this. Although wells east of the fault were not completed during June and July, when peak production was secured, the fault has served as a protecting trap for such wells. Wells being completed now east of the fault show initial productions that compare very favorably with those of wells of similar structural position west of the fault that were completed during the mid-summer. Gravity of oil east of the fault seems to be a

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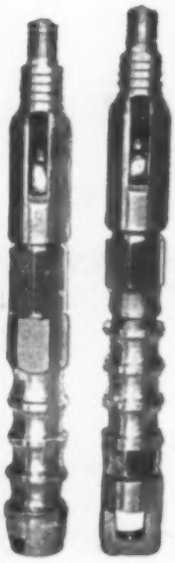

Fig. 22 Fig. 21

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little higher than gravity of oil west of the fault.

Water Shutoffs and Casing Programs

Testing water shutoffs in the field at first proved difficult because of the water's shallow depth and the large sized casing used. Bailing holes nearly dry caused the formations to heave and damaged the shoe of the water string. This led to the almost universal acceptance in testing water shutoffs of a practice followed to a degree in some other fields. This practice is to run in a testing string extending about five feet below the shoe of the water string. The bottom point on the testing string is perforated pipe and the lower end is closed. This prevented the formation from heaving and permitted bailing the well to a reasonable depth.

Casing programs have varied according to operating companies. Some have set 18-inch and 15½-inch conductor strings and 12½-inch water strings, but most companies have eliminated the conductor strings and have used only 11-inch water strings. In the first new wells there were a few 10-inch oil strings. These proved unsatisfactory and as a result, most of the oil strings are 8¼-inch casing. Those wells setting a second water string below the intermediate edgewater used 8¼-inch casing for this purpose and consequently have a 6¼-inch oil string.

Coring

As it has cost very little more to core a well than to drill it without coring, many wells around the rim of the field have been cored continually from about 1000 feet. This has proven particularly advantageous, since such work has permitted penetrating all of the oil-bearing sands. The less attractive looking, or gray sands, were plugged off with cement prior to landing the oil string. Continuous coring and this method of plugging off gray sands have been used so successfully and frequently in the field that they represent an advance development in the art of drilling wells contributed distinctly by the Inglewood field.

Character of Gas and Oil

Even though the gasoline content of the gas in the Inglewood field has been low, there is sufficient gasoline in the natural gas to warrant the erection of gasoline plants. Natural gas has also been taken from the field, and there has been very little, if any waste of oil or gas.

The oil generally is classified as a heavy oil, since the bulk of it carries only 12 per cent to 16 per cent gasoline. The oil from the central part of the field contains as much as 20 per cent to 25 per cent gasoline. With the decline in production going on in the light oil fields, such oil will become of increasing value.

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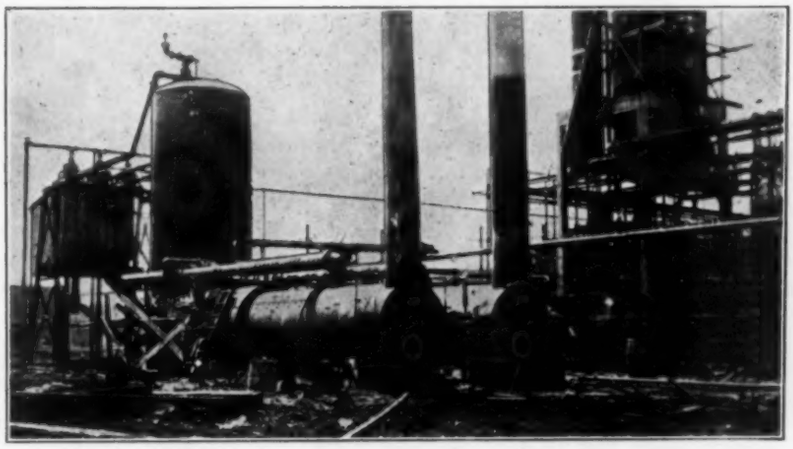

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SQUEAKS FROM THE BULL WHEEL

"Robson, do you know why you are like a donkey?" the jester queried.

"Like a donkey," echoed Robson, opening his eyes wide. "I don't."

"Because your better half is stubbornness itself."

The jest pleased Robson immensely, for he at once saw the opportunity for a glorious dig at his wife. So when he got home he said:

"Dear, do you know why I am like a donkey?"

He waited a moment expecting his wife to give it up. But she didn't. She looked at him somewhat pityingly as she answered:

"I suppose it's because you were born so."

Jimson bought a business through an agent as a going concern in first class condition. After six months he failed, but took his trouble lightly.

Meeting the agent some time later, he said: "Do you remember selling me a business as a going concern?"

"Yes, of course I do."

"Well, it's gone."

Prof. (in quiz section): "Who defeated the Israelites?"

Student (coming out of a day dream): "I dunno! I don't follow any of these bush league teams."

"Georgie, who taught you to use those dreadful words?"

"Santa Claus, mamma."

"Santa Claus?"

"Yes, mamma, when he fell over a chair in my room on Christmas eve."

"You look all shot, Ned. Didn't you sleep well?"

"No! My room-mate and I suffer from alternate insomnia."

"Alternate insomnia? What's that?"

"Why, whichever of us gets to sleep first keeps the other awake."

"Poor little Fluffy is gone," sighed the mistress of the late Peke who had been kissed by a taxicab. "He was such a playful rascal."

"An' a great help in washin' dishes," agreed the cook.—American Legion Weekly.

An Eastern farmer, who had moved to California, had heard that his neighbor raised unusually large potatoes, so he sent his hired man over to get a hundred pounds.

"Go right back," said the Californian, who wanted to impress the stranger, "and tell your boss that I won't cut a potato for any man."

A Scot applied for a position as patrolman on the London police force.

"Suppose, MacFarland, you saw a crowd gathered at a certain point on your beat, how would you disperse it, quickly with the least trouble?"

"I would pass the hat."

A burglar got into my house at three o'clock this morning, when I was on my way home from the club.

Did he get anything?

"He certainly did! The poor beggar is in the hospital. My wife thought it was me."

"Look here," commanded the traffic cop, "if you're the driver of the car that knocked down this old lady, you're under arrest."

"Wot's the matter?" asked the hardened motorist in surprise. "Ain't it all right?"

"Oh, sure, but you parked too long after the accident."

They were talking about inventions.

"The man who invented the flyin' machine was a great genius," said Pat.

"Hi think wireless is the greatest invention," said 'Arry.

"Vell," said Ignatz, "the fellow that invented interest was no slouch."

Cynthia—How is your husband?

Dorothy—I haven't seen him for five years. I think I must have said something to annoy him.

"Her line is like a clothesline."

"How so?"

"Airs a lot of intimate stuff."—Centre Colonel.

"Where were you last night?"

"It's a lie!"

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On a block of acreage assembled in Dry Hole County, State of Expectancy, a wild, wild, wildcat well is being drilled by a crew of oldtimers with a shined up second-hand string of tools picked up here and there by the Bridgeport Machine Company.

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Drilling reports may be had by listening in on the Hotel Lassen broadcasting station any Wednesday evening between 9:00 and 10:00. This station is operated under the call letters of K F H and with a wave length of 268 meters.

The drilling crew is hard boiled and refuse to work unless entertained. So the Bridgeport Roustabout Orchestra is kept on the derrick floor to furnish music.

Bill Barr of the Regan Forge & Engineering Company is a hound for standardization. Bill says he got his idea in standardization from hotel keepers, as he noticed they standardized a long time ago.

"Go into a restaurant or hotel and order prunes and you will always get seven. They've all standardized," says Bill, who can't resist an opportunity to advertise a California product even in a standardization conversation!

Teacher—Let us suppose a cat has fallen into a well. The walls of the well are slippery, and every two feet she climbs, she falls back one. How long will it take her to get out?

Son of Efficiency Expert—I have little or no interest in such a cat.—Magnolia Oil News.

"I thought you said if I were sociable with the judge I should get off."

"Were you?"

"Yes; I said 'Good morning, Judge; how are you today?' And he replied, 'Fine—twenty-five dollars'."

"I'm told that you began life as a poor bricklayer. What was your first step forward?"

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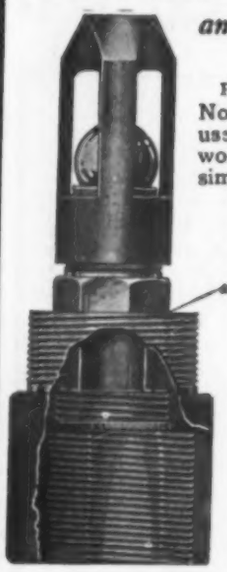

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Cameron Iron Works
Continental Supply Company
Regan Forge & Engineering Co.

Burners—
Continental Supply Company
Gasp Pump & Burner Mfg. Co.
Gould Burner Co.
Regan Forge & Engineering Co.
Ozmulgee Boiler & Welding Wks.

Bull Wheels—
Continental Supply Company
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.

Calf Wheels—
Continental Supply Company
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.

Carbon and Bortz—
R. S. Patrick

Casing—
Continental Supply Company
National Tube Co.
Regan Forge & Engineering Co.
Republic Supply Co.
South Chester Tube Company
Superior Tube Co.

Casing Shoes—
Baker Casing Shoe Co.
Bridgeport Machine Co.
Continental Supply Company
The National Supply Cos.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Co.

Cement—
Oklahoma Portland Cement Co.

Cement Hardener—
The Sullivan Co.

Chain Blocks—
Yale & Towne Mfg. Co.

Charcoal Iron Boiler Tubes—
The Tyler Tube & Pipe Co.

Chemicals—
Ward Chemical Co.

Collapsible Rotary Bits—
O. M. Carter

Control Heads—
Continental Supply Company
Southern Brass Mfg. & Plating Company

Conservation—
Westcott & Greis

Core Drills—
Allen & Courtney Oil Tool Co.
O. M. Carter
Elliott Core Drilling Co.
H. C. Smith Mfg. Co.
Spengler Core Drilling Co.

Compressors—
Butler Mfg. Co.
Continental Supply Company
Gardner Governor Co.
Hope Engineering & Supply Co.
Sullivan Machinery Co.
United Iron Works, Inc.

Cordage—
Continental Supply Company
The Longhart Supply Company
The National Supply Cos.
Republic Supply Co.

Crown Blocks—
Baash-Ross Tool Co.
Continental Supply Company
International Derrick & Equipment Co.
Lufkin Foundry & Machine Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.

Couplings—
Continental Supply Company
Harrisburg Pipe & Pipe Bending Co.
Superior Tube Company

Cocks, Drain—
The Lunkenheimer Company

Dehydrating Processes—
Wm. S. Barnickel Co.
Petroleum Rectifying Co.

Derricks and Rigs—
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
National Turnbuckle Derrick Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Robertson-McDonald Lumber Co.
Superior Tube Company

Diamond, Black—
R. S. Patrick
Sullivan Machinery Co.

Diamond Core Drills—
R. S. Patrick
Sullivan Machinery Co.

Diamond Drilling Carbon—
R. S. Patrick

Disc Bits—
Continental Supply Company

Diesel Engines—
Busch-Sulzer Bros. Diesel Engine Co.
McIntosh & Seymour Corp.

Ditchers—
Buckeye Traction Ditcher Co.

Draw Works—
Continental Supply Company
Lufkin Foundry & Machine Co.

Drilling Cables—
American Cable Co.
Bridgeport Machine Co.
Continental Supply Company
Frick-Reid Supply Co.
The National Supply Cos.
Peden Iron & Steel Co.
Regan Forge & Engineering Co.
Republic Supply Co.
Star Drilling Machine Co.
Wickwire Spencer Steel Corp.

Drill Pipe Slips—
Baash-Ross Tool Co.
Continental Supply Company

Drilling Machines—
Bridgeport Machine Co.
Continental Supply Company
Parkersburg Rig & Reel Co.
Star Drilling Machine Co.

Drill Collars—
Baash-Ross Tool Co.
Continental Supply Company
Federal Supply Co.

Drill Pipe Cutting—
Baash-Ross Tool Co.
Houston Engineers, Inc.

Drilling Tools—
Acme Fishing Tool Co.
Baash-Ross Tool Co.
Continental Supply Company

Drilling, Diamonds for—
R. S. Patrick

Drill Pipe—
Continental Supply Company
Frick-Reid Supply Co.
National Tube Co.
Republic Supply Co.
Reading Iron Co.
South Chester Tube Company

Drilling Equipment—
Baash-Ross Tool Co.
Bridgeport Machine Co.
Continental Supply Company
Hercules Supply Co.
Republic Supply Co.
Star Drilling Machine Co.
Superior Tube Co.

Drive Pipe—
Continental Supply Company
Republic Supply Co.
Reading Iron Co.
Superior Tube Company

Electrical Equipment—
General Electric Co.
Westinghouse Elec. & Mfg. Co.

Elevators—
BBridgeport Machine Co.
Continental Supply Company
The Cunningham Co.
Dunn Mfg. Co.
Lellus Rotary Tool Works
Wilson & Willard Mfg. Co.

Electric Equipment—
General Electric Co.

Engines, Diesel—
Western Machinery Co.

Engines, Gas—
Bruce-Macbeth Engine Co.
Climax Engineering Co.
Continental Supply Company
Frick-Reid Supply Co.
Hope Engineering & Supply Co.
Spence Machine Co.
The Pattin Bros. Co.
Waukesha Motor Company
Western Machinery Co.

Engines, (Gasoline or Kerosene)—
Climax Engineering Co.
Waukesha Motor Co.

Engines, Oil—
Continental Supply Company
Frick-Reid Supply Co.
The Pattin Bros. Co.
Western Machinery Co.

Engines, Pumping—
Ajax Iron Works
Bessemer Gas Engine Co.
Bridgeport Machine Co.
Climax Engineering Co.
Continental Supply Company
The Brownell Co.
De La Vergne Machine Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hope Engineering Co.
Lucey Mfg. Corp.
Lufkin Foundry & Machine Co.
The National Supply Cos.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Republic Supply Co.
Rock Island Plow Co.
Spence Machine Co.
Southern Engine & Pump Co.
Titusville Iron Works
Waukesha Motor Company
Western Machinery Co.

Engineers—
Foster & Reiter
Hope Engineering & Supply Co.
Lee C. Moore & Co.
D. T. Ring

Fire Protection—
Continental Supply Company
Oil Conservation Engineering Co.

Fish Tail Bits—
Continental Supply Company
Frick-Reid Supply Co.
Federal Supply Co.
Lucey Mfg. Corp.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.

Fishing and Drilling Tool—
Federal Supply Co.

Floor Circle Braces—
Continental Supply Co.
Dunn Mfg. Co.

Fuel Oil—
Gulf Refining Co.
Sinclair Refining Co.

Gasoline Extraction Compressors—
Continental Supply Co.
Bessemer Gas Engine Co.
Hope Engineering & Supply Co.
Sullivan Machinery Co.

Gauge Cocks—
The Lunkenheimer Company

Gauge Hatches—
General Machine Works
Oil Conservation Engineering Co.
Westcott & Greis

Gauges—
Continental Supply Co.
Oil Conservation Engineering Co.
Westcott & Greis

Gas Engines—
C. F. Camp Co.
S. M. Jones Co.
Portable Rotary Rig Co.
Joseph Reid Gas Engine Co.
Waukesha Motor Co.

Gas Generators—
Baird Supply Co.

Gas Lift System—
Jones-McLaughlin Co.

Gas Traps—
American Tank Co.
Continental Supply Company
Lorraine Corp.
Smith Separator Co.
Trumble Gas Trap Co.

Gasoline and Oil Storage Tanks—
American Tank Co.
Butler Mfg. Co.
Continental Supply Company
Kansas City Struct. Steel Co.
Parkersburg Rig & Reel Co.
Pelican Iron Works Co., The

Genuine Wrought Iron Casing—
Reading Iron Co.

Geologists—
Edwin B. Hopkins
Foster & Reiter
Armstrong, Price W.

Governors—
Gardner Governor Co.

Grips and Clamps—
Continental Supply Company
J. P. Ratigan
Sargent Engineering Corp.

Heat Exchangers—
Brown Welding & Machine Co.
Hope Engineering & Supply Co.

Hoists—
Emsco Steel Products Co.

Hose—
Continental Supply Company

Houses—
Crain Ready-Cut House Co.

Iron Casing—
Superior Tube Company
South Chester Tube Company

Jars—
Spang & Co.

Joint Collars—
Federal Supply Co.

Laboratory Equipment—
Continental Supply Company
Fort Worth Laboratories

Lapwelded Steel Boiler Tubes—
The Tyler Tube & Pipe Co.

Lead in Oil—
Eagle Picher Lead Co.

Lead Wool and Containers—
Eagle Picher Lead Co.

Lighting Systems—
Bridgeport Machine Co.
Continental Supply Company
General Electric Company
Westinghouse Elec. & Mfg. Co.

Line Pipe—
Continental Supply Company
Republic Supply Co.
Reading Iron Co.

Litharge—
Eagle Picher Lead Company

Lumber—
Robertson-McDonald Lumber Co.

Lubricators—
The Lunkenheimer Company
Manzel Bros. Co.

Manufacturers—
Robinson Packer Co.

Maps—
Heydrick Mapping Co.

Meters—
Continental Supply Company
Westcott & Greis

Motors—
General Electric Co.
Twin City Co.
Westinghouse Elec. & Mfg. Co.

Oiling Devices—
The Lunkenheimer Company

Oil Field Forgings—
Sheffield Steel Corp.

Oil Field Supplies—
American Tank Co.
Butler Mfg. Co.
Bridgeport Machine Co.
Continental Supply Company
The Cunningham Co.
Federal Supply Company
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Frick-Reid Supply Co.
Erle P. Halliburton
Hercules Supply Co.
International Supply Co.
Jarecki Mfg. Company
Kansas City Bolt and Nut Co.
Kansas City Struct. Steel Co.
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Lucey Mfg. Corp.
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Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
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Regan Forge & Engineering Co.
Robinson Packer Co.
Sheffield Steel Corp.
Smith Separator Co.
Southern Brass Mfg. & Plating Company
Superior Tube Co.
United Iron Works, Inc.
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Oil Well Casing—
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Frick-Reid Supply Company
Republic Supply Company
Superior Tube Company

Oil Well Cementing—
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Oklahoma Portland Cement Co.

Oil Well Reamers—
Jones Oil Well Reamer Co.

Oil Well Shooting—
Eastern Torpedo Company
U. S. Torpedo Co.
Zero Hour Torpedo Co.

Overshots—
Baash-Ross Tool Co.
Continental Supply Company
LeBus Rotary Tool Works

Packers—
Continental Supply Company
The Guiberson Corp.
Larkin & Co.
Layne & Bowler
Robinson Packer Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.

Packing—
Continental Supply Company
D. F. Connolly Agency
Gustin Bacon Manufacturing Co.
Frick-Reid Supply Co.
The National Supply Cos.
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
Republic Supply Co.

Paints—
Continental Supply Company
Eclipse Paint & Mfg. Co.
Peden Iron & Steel Co.
Sullivan Company
Tnemec Paint & Oil Co.

Panel Boards—
General Electric Co.
Westinghouse Elec. & Mfg. Co.

Patents—
Hardway & Cathey
Lancaster & Allwine
Jack A. Schley
Jesse R. Stone

Perforated Casing—
Kobe, Inc.

Pipe—
A. M. Byers Co.
Central Tube Co.
Continental Supply Company
Frick-Reid Supply Co.
Harrisburg Pipe & Pipe Bending Co.
Hercules Supply Co.
International Supply Co.
National Tube Co.
The National Supply Cos.
Oil Well Supply Co.
Peden Iron & Steel Co.
Reading Iron Co.
Republic Supply Co.
South Chester Tube Company
Superior Tube Company
Youngstown Sheet & Tube Co.

Pipe Cleaning Machines—
W-K-M Company

Pipe Grips—
Continental Supply Company

Pipe Insulation—
Johns-Manville, Inc.

Pipe Screwnig Machines—
Buckeye Traction Ditcher Co.

Pipe Threading Machines—
Jarecki Mfg. Company
Landis Machine Co.
Standard Engineering Co.
Williams Tool Corporation

Pipe Vises—
J. H. Williams & Co.

Pipe Wrenches—
Continental Supply Company
Dunn Mfg. Co.
The Guiberson Corp.
Trimont Mfg. Co.
LeBus Rotary Tool Works
Republic Supply Co.
J. H. Williams & Co.
Wickwire Spencer Steel Corp.

Plumb Bobs and Seats—
Sargent Engineering Corp.

Portable Buildings—
Butler Manufacturing Co.
International Derrick & Equipment Co.

Portable Drilling Rigs—
Bridgeport Machinery Co.
Continental Supply Company
Lee C Moore & Co., Inc.
Parkersburg Rig & Reel Co.
Star Drilling Machine Co.
The National Supply Cos.
Waukesha Motor Company

Portable Compressors—
Continental Supply Company
Sullivan Machinery Co.

Pulleys—
Continental Supply Company
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.

Pulling Machines—
Clark Machine Co.
Coneinental Supply Company
Iron King Mfg. Co.

Pull Rods—
Sheffield Steel Corp.

Pumps—
Axelson Machine Co.
Continental Supply Company
D & B Pump & Supply Co.
C. C. Fetty
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Manufacturing Co.
Jarecki Manufacturing Co.
Lucey Manufacturing Corp.
National Transit Pump & Machine Co.
Northrup Equipment Company
Oil Well Supply Co.
Pelican Well Tool & Supply Co.
Republic Supply Co.
Southern Engine & Pump Co.
Texas Oil Pump Co.
United Iron Works, Inc.
Waukesha Motor Co.

Pumping Engines—
C. F. Camp Co.
McIntosh & Seymour Corp.

Pumping Equipment—
General Electric Company
Northrup Equipment Company
Shaffer Specialty Co.

Pumping Powers—
American Well Works Co.
Continental Supply Company
C. C. Fetty
Frick-Reid Supply Co.
International Supply Co.
Jarecki Mfg. Co.
Jensen Bros. Mfg. Co.
Kansas City Hay Press Mfg. Co.
Spence Machine Co.

Regulators—
Westcott & Greis

Refined Products—
Gulf Refining Co.
Humble Oil & Refining Co.
Magnolia Petroleum Co.
Sinclair Refining Co.
The Texas Co.

Recorders—
Fort Worth Laboratories

Refinery Equipment—
American Tank Co.
Butler Mfg. Co.
Continental Supply Company
Oil Conservation Engineering Co.
Petroleum Iron Works Co., The
Republic Supply Co.
Smith Separator Co.
Titusville Iron Works
United Iron Works, Inc.
Westcott & Greis
Wyatt Metal & Boiler Works

Rig Irons—
Continental Supply Co.
International Supply Co.
Lee C. Moore & Co., Inc.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Republic Supply Co.

Rope Socket Metal—
Eagle Picher Lead Co.

Rotaries—
International Supply Co.

Rotary Fish Tail Bits—
Continental Supply Company
Multi-Cutr Rotary Bit Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Co.

Rotary Rock Bits—
Continental Supply Company
Hughes Tool Co.
Reed Roller Bit Co.

Rotary Tools—
Federal Supply Company

Safety Casing Clamps—
Shaffer Specialty Company

Sand Pumps—
Larkin & Co.

Sand Reel Supports—
Shaffer Specialty Co.

Screen Casing—
Kobe, Inc.

Separators—
American Tank Co.
Butler Mfg. Co.
Continental Supply Company
Lorraine Corp.
M & V Tank Co.
Smith Separator Co.
Trumble Gas Trap Co.

Specialty Manufacturers—
Shaffer Specialty Co.

Steel, Alloy—
Andrews Steel Co.
Central Steel Co.
Ludlum Steel Co.

Steel Bull Wheels—
Bradford Rig & Reel Co.
McIntosh & Seymour Corp.

Steel Derricks—
Continental Supply Company
Emsco Steel Products Co.
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Steel Crown Blocks—
Continental Supply Company
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Steel Storage Tanks—
American Tank Co.
Butler Mfg. Co.
Continental Supply Company
Petroleum Iron Works Co., The

Still Covering—
Johns-Manville, Inc.

Strainers—
Continental Supply Company
Emsco Steel Products Co.
Howard Smith Company
Kobe, Inc.
Layne & Bowler Co.
J. H. McEvoy & Co.
Pelican Well Tool & Supply Co.

Special Steels—
Central Steel Co.

Steel Tanks—
Bradford Rig & Reel Co.

Structural Steel—
Butler Mfg. Co.
United Iron Works, Inc.

Sucker Rod Lines—
Continental Supply Company

Sucker Rod Elevators—
The Cunningham Co.

Sucker Rod Hangers—
Lorraine Corp.
Robinson Tool Co.

Sucker Rod Hooks—
The Cunningham Co.

Sucker Rod Rotors—
Sargent Engineering Corp.

Sucker Rod Sockets—
Baird Supply Co.
Brown Welding & Machine Co.
Continental Supply Company
The Cunningham Co.
Federal Supply Company
Shaffer Specialty Co.
Western Supply Co.

Sucker Rods—
Axelson Machine Co.
Continental Supply Company
Columbus Sucker Rod Co.
D & B Pump & Supply Co.
Dunn Mfg. Co.
Frick-Reid Supply Co.
S. M. Jones Co.
The National Supply Co.
Kansas City Bolt & Nut Co.
Oil Well Supply Co.
J. P. Ratigan
Republic Supply Co.
Sheffield Steel Corp.

Swabs—
Continental Supply Company
The Cunningham Co.
Shaffer Specialty Co.

Swing Joints—
General Machine Works
Oil Conservation Engineering Co.
Westcott & Greis

Tank Bolts—
Continental Supply Company
Sheffield Steel Corp.

Tanks—
American Tank Co.
Butler Mfg. Co.
Continental Supply Company
The Brownell Co.
Kansas City Struct. Steel Co.
Maloney Tank Co.
M & V Tank Co.
Panhandle Refining Co.
Parkersburg Rig & Reel Co.
Petroleum Iron Works Co., The
United Iron Works
Wyatt Metal & Boiler Works

Tank Deadwood—
Robertson-McDonald Lumber Co.

Tank Equipment—
Continental Supply Company
Johns-Manville, Inc.
Oil Conservation Engineering Co.
Parkersburg Rig & Reel Co.
Westcott & Greis

Tank Insulation—
Johns-Manville, Inc.

Tank Roofs—
Johns-Manville, Inc.

Temper Screws—
Burns Tool Co.

Thermometers—
Continental Supply Company
Fort Worth Laboratories

Timbers—
Robertson-McDonald Lumber Co.

Tongs—
Bridgeport Machine Co.
Continental Supply Company
Dunn Mfg. Co.
Guiberson Corporation
Howard Smith Company
LeBus Rotary Tool Works
Pelican Well Tool & Supply Co.
J. H. Williams & Co.
Wilson & Willard Mfg. Co.

Tool Joints—
Baash-Ross Tool Co.
Bridgeport Machine Co.
Continental Supply Company
Emsco Steel Products Co.
Hughes Tool Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Co.

Tools (Fishing and Drilling)—
Acme Fishing Tool Co.
Bridgeport Machine Co.
Brown Welding & Machine Co.
Continental Supply Company
Frick-Reid Supply Co.
Houston Engineers, Inc.
Hughes Tool Co.
International Supply Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Co.
Spang & Co.
Star Drilling Machine Co.
Sullivan Machinery Co.

Toothless Slips—
LeBus Rotary Tool Works

Tractor Winch—
C. F. Camp Co.
Rock Island Plow Co.

Traveling Blocks—
Baash-Ross Tool Co.
Continental Supply Company
Lufkin Foundry & Machine Co.
Regan Forge & Engineering Co.

Tret-O-Lite—
W. S. Barnickel & Co.

Trucks—
Wichita Falls Motor Co.

Tubing Catcher—
Continental Supply Company
Dunn Mfg. Co.
Guiberson Corporation

Tubing Lines—
Continental Supply Company

Tubing Protectors—
Mexia Planing Mill Co.

Tubing—
Continental Supply Company
Central Tube Co.
National Tube Co.
Republic Supply Co.
Reading Iron Co.
South Chester Tube Company

Underreamers—
Bridgeport Machine Co.
Wilson & Willard Mfg. Co.

Vacuum Pumps—
Continental Supply Company
Sullivan Machinery Co.

Valves—
Continental Supply Company
Darling Valve & Mfg. Co.
The Charles N. Hough Mfg. Co.
Ludlow Valve Mfg. Co.
The Lunkenheimer Company
Norris Bros.
Northrup Equipment Company
Smith Separator Co.
Sour Lake Machine Co.
Southern Brass Mfg. & Plating Company
Texas Oil Pump Co.
Westcott Valve Mfg. Co.

Valves, Gate—
The Lunkenheimer Company

Valves and Fittings—
Continental Supply Company
Darling Valve & Mfg. Co.
D & B Pump & Supply Co.
Hercules Supply Co.
Jarecki Mfg. Co.
Ludlow Valve Mfg. Co.
Lufkin Foundry & Machine Co.
The Lunkenheimer Company
The National Supply Cos.
Peden Iron & Steel Co.
Pittsburgh Reinforced Brazing & Machine Co.
Republic Supply Co.
United Iron Works

Vapor Tight Insulated Tank Tops—
Johns-Manville, Inc.

Vents—
Westcott & Greis
Oil Conservation Engineering Co.

Walking Beams—
Continental Supply Company
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.

Welding and Cutting Equipment—
Continental Supply Company

Working Barrels—
Axelson Machine Co.
Continental Supply Co.
D & B Pump & Supply Co.
Howard Smith Company
Northrup Equipment Company
Republic Supply Co.
The Charles N. Hough Mfg. Co.
Southern Brass Mfg. & Plating Company
Texas Oil Pump Company

Water Gauges—
Continental Supply Company
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Water Cans—
Continental Supply Company
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Water Softening Compounds—
Ward Chemical Co.

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American Cable Co.
Bridgeport Machine Co.
Continental Supply Company
Hercules Supply Co.
International Supply Co.
The Longhart Supply Company
Regan Forge & Engineering Co.
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Locomotive Engine Oil	Ice Machine Oil	Laundry Machinery Oil

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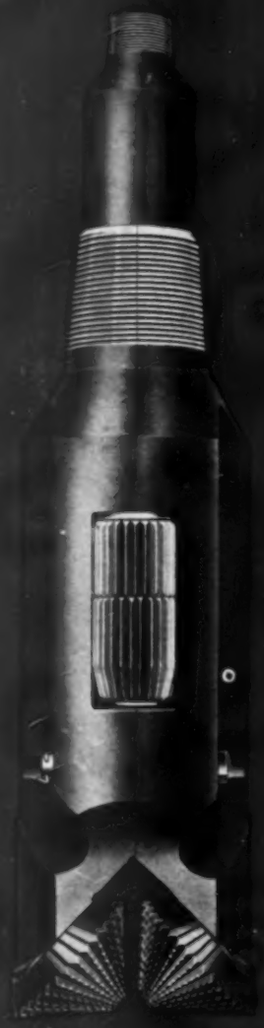

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